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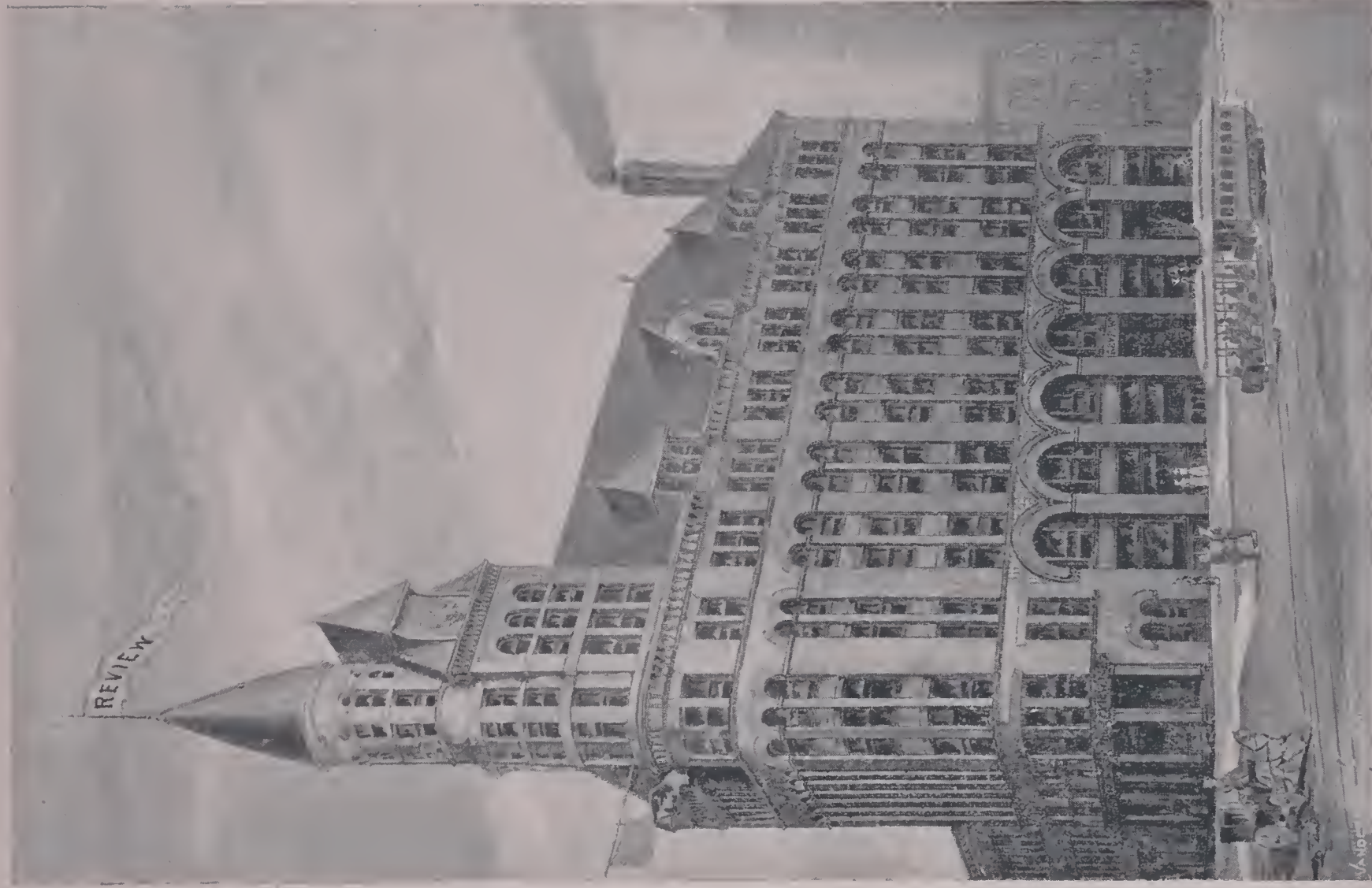
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SPOKANE, WASHINGTON.

JUL 1 1897





THE NEW BUILDING OF THE SPOKANE REVIEW,
CORNER WEST RIVERSIDE AVE. AND MONROE ST.

THE CITY OF SPOKANE.

ITS TRIBUTARY COUNTRY AND ITS RESOURCES.

BY
JOHN R. REAVIS.

SECRETARY OF THE
SPOKANE CHAMBER OF COMMERCE.

PUBLISHED BY
CLOUGH & GRAVES,
SPOKANE, WASHINGTON.

1894.
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TESTIMONIALS FROM LEADING BANKS.

CITIZENS NATIONAL BANK.

E. B. HYDE, President.

B. C. VAN HOUTEN, Vice-Pres.

J. F. McEWEN, Cashier.

E. J. BOWMAN, Asst. Cashier.

APRIL 13, 1891.

I take great pleasure in testifying to the business merits of the firm of Clough & Graves, and cheerfully recommend them to those who intend making investments. They have been actively engaged in the real estate and other investment business for the past three years and bear an enviable reputation for strict integrity and conservative business methods.

E. B. HYDE, President.

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JAMES N. GLOVER, President.

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APRIL 14, 1891.

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JAMES N. GLOVER, President.

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I regard the firm of Clough & Graves as responsible, reliable and worthy of confidence. They are owners of much valuable property in Spokane, both improved and unimproved.

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A. M. CANNON, President.

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B. H. BENNETT, Cashier.

April 14, 1891.

The firm of Clough & Graves, composed of ex-Mayor C. F. Clough and Jay P. Graves, have been connected with nearly every prominent enterprise for the advancement of the city's interest. They are men of strict integrity and are responsible and reliable.

B. H. BENNETT, Cashier.

EXCHANGE NATIONAL BANK.

J. HOOVER, President.

A. J. ROSS, Vice-President.

E. J. DYER, Cashier.

April 14, 1891.

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J. HOOVER, President.

BANK OF COLUMBIA.

H. N. BELT, President.

L. S. ROBERTS, Vice-Pres.

W. M. BYERS, Cashier.

April 14, 1891.

I cheerfully recommend Messrs. Clough & Graves as being responsible, reliable and conservative. Their reputation is good.

H. N. BELT, President.

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INTRODUCTORY.

 IN these pages we present to the reader a work descriptive of the prosperous, progressive young City of Spokane and its tributary country. The aim of the Author has been to state plainly and concisely the facts in the case. We have a City of splendid advantages and it is surrounded by a territory not only mighty in extent but boundlessly rich in both agricultural and mineral products. Here is a most inviting field for the farmer, the miner, the mechanic, the laborer and the capitalist.

To those of less favored regions, we say, come and investigate for yourselves.

CLOUGH & GRAVES,

Real Estate and Investment Brokers,

SPOKANE, WASHINGTON



THE NORTHWESTERN EXPOSITION BUILDING AT SPOKANE.

THE STATE OF WASHINGTON.

IN the November number of *Scribner's Magazine* for 1890 appeared the third and last of a series of very able articles on "Nature and Man in America" by Prof. N. S. Shaler, in which he sums up the comparative advantages of the distinct geographical districts of the Pacific Coast for the development of the human species and of human industry. He says of the district extending from the Fraser River on the north to the Columbia River on the south, running back inland several hundred miles, which territory includes the new State of Washington: "We have here the most varied opportunities for industries which are offered by any portion of the American continent. Coal is probably abundant; there are numerous excellent water-powers, and the soil within the limits of the humid area is very fertile. The forests are of good quality and of great extent; the maritime resources appear to have a value unequaled by any portion of the American continent. The region has been blessed by the character of its settlers for they have been derived from the most vigorous portion of the race. Taking it all for all, the physiographer is more disposed to foretell greatness for this section than for any other equally extensive area on the western side of the continent." Speaking elsewhere in the same article of the Rocky Mountain Country in general, the writer says: "Although we as

yet know comparatively little of the under-earth resources of this district, it is evident that it contains a wide range of mineral products, perhaps a greater variety than is known to exist in any other country, all of which with the progress of exploration and the cheapening of mining cost will become the basis of industries. So far, the mining industry of this section has been in the main turned to the precious metals, and we have come to associate the idea of mining here with the winning of gold and silver. Coal, iron, the various alkaline salts, the varieties of bitumen, quick-silver, lead, zinc, and a host of other substances which have a place in our industries, exist in profitable quantities in this region."

This is an impartial, philosophic view of a country embraced by the State of Washington, set forth by a man of national standing as a writer on the subjects of this class, and who has made a careful study of the physical and productive character of every important part of the United States and of the continent of North America. What he says is true. Every word of praise is deserved. "We have here," he says, "the most varied opportunities for industries offered by any portion of the American continent." Why does he come to these conclusions?

Because we have from the mouth of the Fraser River to the mouth of the Columbia River, the finest commer-

cial body of water in the world—Puget Sound. Because we have bordering on Puget Sound the finest and most extensive area of commercial timber in the world.

Because we have in the country extending back from Puget Sound to the Rocky Mountains, including eastern Washington, a distance of about five hundred miles, vast deposits of lead, coal, iron, silver and gold.

Because we have in that same area soil that produces more wheat to the acre, more barley to the acre, more rye to the acre, more timothy and other feed grasses to the acre than any other soil on the continent.

Because in that same area is grown successfully every staple fruit of the United States, except oranges and lemons, and every staple vegetable of the United States, and in quantities and of quality sufficient for home consumption and for export.

Because in that same area is the finest and most picturesque system of clear water lakes and rivers on the continent.

Because in that same area there is a climate better adapted, by reason of its clear bracing atmosphere, freedom from malarial poisons and happy alternations of heat and cold, to the physical development of man and the encouragement of human industry than any other portion of the continent.

These are facts subject to proof. They lie at the basis of Washington's unparalleled growth.

Eleven years ago Washington had a population of 75,000; according to the United States census taken in 1890 it has a population of 349,000.

Eleven years ago its taxable valuation of property was \$23,780,000; the taxable valuation for the year 1890, was \$201,000,000.

Eleven years ago Washington did not possess a single mile of railway; to-day there are within her borders 1,500 miles of completed railway, two transcontinental lines traverse its territory, a third is just crossing its northern line, and a fourth will build from its eastern to its western boundary in the years 1891 and 1892.

Could this marvelous growth of population, of taxable wealth and railroad mileage occur in any region that does not possess very extensive and uncommon resources?

The object of this preliminary statement is to give a general but correct impression of what the State of Washington is.

Spokane is in the State of Washington. It is the metropolis of the eastern portion of the State, as well as of northern Idaho and a large section of British Columbia. It is about Spokane and the country tributary to it that we are now concerned.

THE CITY OF SPOKANE.

LET us present a few facts about the City of Spokane (formerly named Spokane Falls). In 1880, just eleven years ago, it was a village of less than 200 inhabitants; according to the census taken last year it had a population of 25,000, it now has nearly 30,000. In 1880 the taxable valuation of the property in Spokane was \$1,800; the assessed valuation for the year 1890 was \$18,790,000, which was taken on a basis of 50 per cent. of the real valuation. In 1880 the United States mail came to Spokane once a week, being carried on the back of a horse, and the receipts at the Post Office that year amounted to less than \$60.00; now there are twenty-six daily mails distributed, and the receipts of the Post Office will reach \$50,000 for the year. In 1880 the streets of the city consisted of two country roads; now we have many miles of well-graded streets, most of them well lighted by electricity. In 1880 there was only one weekly newspaper published in Spokane, to-day there are two morning dailies and two afternoon dailies, two of them printed on perfecting presses, and all of them creditable representatives of modern journalism. In 1880 there was one school house in Spokane, small and constructed of rough boards; last year we spent \$250,000 in the construction of four large and handsomely designed brick public school buildings, and one modern High School building. In 1880 there was one private bank of small capital, now there

are seven National banks, two Savings banks, and two private banks, with a combined capital of \$2,200,000. In 1880 there was no railroad transportation into or out of Spokane; to-day there are seven railroads centering here, two of them transcontinental lines, with an additional road, the Great Northern, a third transcontinental road to come in during this year. In 1880 Spokane had no telegraph nor telephone; to-day one can communicate by telegraph and telephone with more than sixty towns and villages within a radius of 100 miles. In 1880 the only manufactory in Spokane was a small saw-mill; to-day we have over twenty manufacturing establishments, one mill alone turning out 20,000,000 feet of lumber annually. Ten years ago there was not sent to market one single bushel of wheat within a radius of 100 miles of Spokane. Last year we grew at least 14,000,000 bushels in that radius and sent 10,000,000 of it to market. Ten years ago there was not a single ounce of lead or silver mined within a radius of 200 miles of Spokane; this year the silver and lead product of this same area will reach \$10,000,000. This is how Spokane has grown. We are not dealing in probabilities or fanciful conjectures, but in facts that tell their own story. There must be a substantial groundwork for a fabric that grows like this.

The secret is geographical position. If you will cast your eye over a good map of the State of Washington



SOME OF SPOKANE'S BUSINESS BLOCKS.

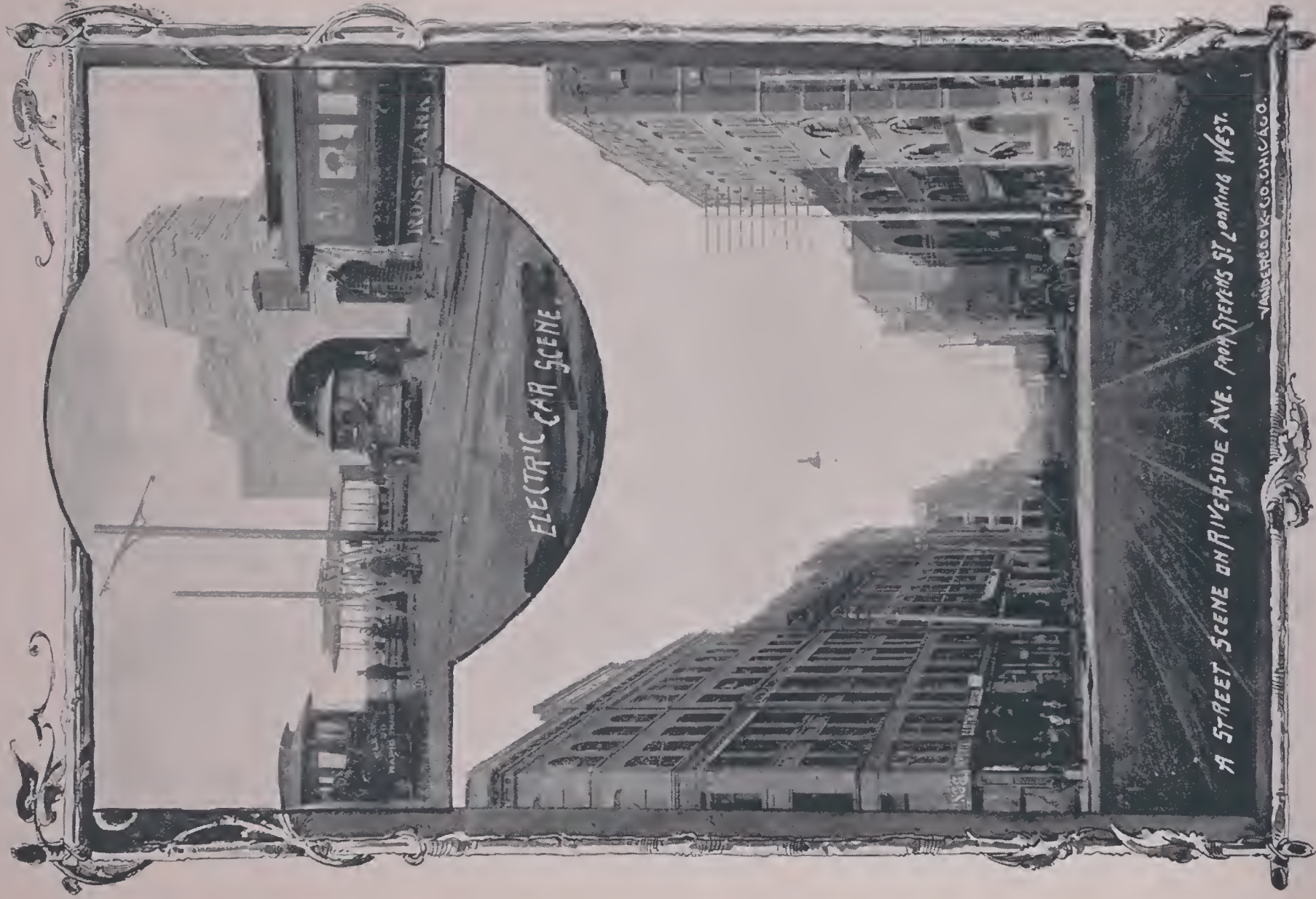
and contiguous territory, you will discover that between the great Rocky Mountain range, which runs north and south through the States of Montana and Idaho, and the Cascade range that runs north and south through western Washington, is a broad basin drained by the Columbia River. It is about 500 miles from the tunnel of the Northern Pacific Railroad piercing the ridge of the Rockies just west of Helena, Montana, to the Northern Pacific tunnel piercing the ridge of the Cascades, about 75 miles east of Puget Sound. The intervening territory is a distinct geographical region that would naturally seek a common supply center. Spokane is that center. Look at the map and see how the railroads radiate from this center in every direction throughout this great Columbia River basin. As has already been happily said, you may start a car at the extremity of almost any of these railway lines within this territory, and it will run by gravity into Spokane. There is not one severe grade on any railroad running into Spokane within the territory which she claims as tributary. This territory is a very wide one. It is nearly 200 miles to its circumference in any one direction. Spokane has no rival in broad territory. It is a territory of nearly 60,000 square miles in extent, and while much of it is mountainous, yet it is capable of supporting a mining, agricultural, pastoral and manufacturing population of at least 3,000,000. At least 250,000 of these people will eventually live in Spokane. This is not an extravagant estimate.

The like has occurred in much less highly favored portions of the United States, and if time lasts and the race continues, it will happen here. An investment made in Spokane to-day, whether in houses, land, manufacturing, or mercantile business, is made for a future great city.

CHARACTER OF THE PEOPLE.

I CAN NOT do better here than to quote something I have already written on this subject.

“The people of Spokane are energetic and progressive. There is a large proportion of young men among those most active in business circles. Many of these have been educated in Eastern colleges and universities. Educated young men from the East generally come West to make their fortunes. Many of them succeed. The chances for making money are far greater than in the older settled, more conservative East. Development comes sooner; results are sooner achieved, and the movement of everything is quicker, sharper and better defined. Young men have, therefore, more to encourage them than in the East. They sooner see the fruits of their labors, and sooner feel the confidence and independence that come from prosperity. The consequence is an increase in activity. The movement of the entire business community is accelerated and heightened until the older East looks with surprise



A STREET SCENE ON RIVERSIDE AVE. FROM STEVENS ST. LOOKING WEST.

VAN DER BEEK & CO. CHICAGO.

upon the achievements of her own sons. Wherever there is industry and thrift, there is hopefulness and happiness.

"The buoyancy of the people of Spokane is marvelous, and while they have had some severe misfortunes, they have never, in the darkest hours, lost confidence in their beloved city. To nearly all of them it is an adopted city, but their affection for it is none the less for that. Indeed, the almost passionate love they have for it is one of their noticeable and distinguishing characteristics. Strangers coming here will find a warm-hearted, educated, wide-awake, enthusiastic people, who are liberal in their views, liberal with their money, and ready to welcome every new comer."

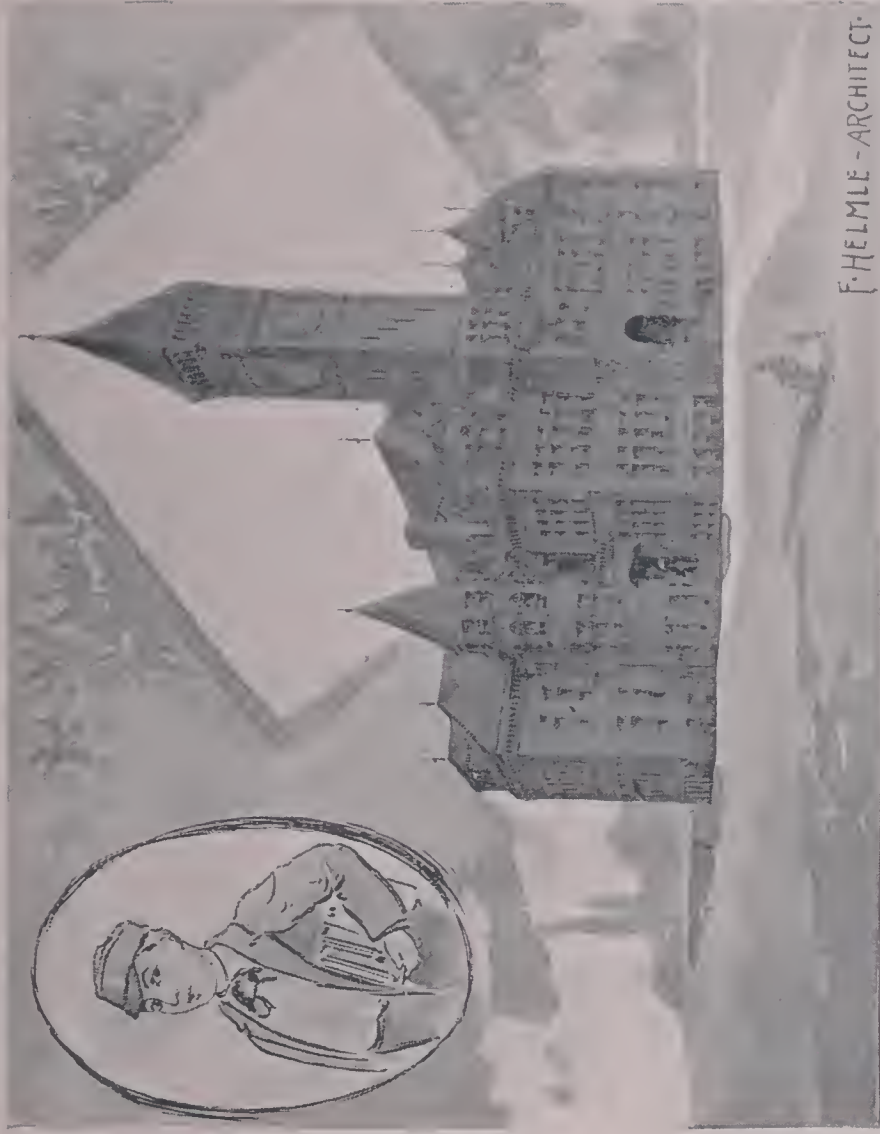
SCHOOLS.

NO city in America is better equipped with schools, in proportion to population, than Spokane. We spent during the year past \$80,000 for four handsome brick public school buildings, and we are now erecting a High School building at a cost of \$100,000. These are in addition to five or six public school buildings of less pretentious character. We have over 3,000 enrolled in our public schools, and the increase is very rapid. There are also several private schools. The Methodists have endowed a collegiate institution that does great credit to the city and State, it having in property and money about \$500,000. The Presbyterians have just begun the erection of the

first building of Spokane University. The Congregationalists have purchased recently 1,000 acres of land east of the city for university purposes. The Benedictine Fathers will erect a collegiate building this year, to cost \$100,000. The Jesuit Fathers have Gonzaga College, a most wealthy and flourishing institution, and will erect a \$300,000 college this year.

CHURCHES.

ALL the leading churches are well represented. The Presbyterians, the Congregationalists, the Baptists, the Episcopalians, the Methodists and the Catholics all have one or more houses of worship each, and some of them are very rich in property and money. The Young Men's Christian Association have a flourishing organization, and have taken steps for the erection of a fine building. The religious element of the city always makes itself felt in case of an emergency. There is what is called the Law and Order League made up principally of the most active members of the various churches, which has accomplished great good by the suppression of open gambling and other kinds of vice. Its members are courageous men who are not afraid to do their duty, and to them largely belongs the credit of almost wholly eradicating from the city that desperate and reckless class that always attempts to fasten itself on a new community, especially in the West.



HIGH SCHOOL BUILDING.
WARD SCHOOL BUILDING.

THE BUILDING PROGRESS OF 1890 AND THE OUTLOOK FOR 1891.

IN August, 1889, Spokane Falls was burned to the ground. The destruction of the business part of the city was complete. More than 60 acres lay in a smoldering heap of ruins. We will not here attempt to recount the theory of how the city went to work to recover from that awful disaster. The story is now well known to all the world. To day, eighteen months after the fire, a new city stands in the place of the old one. It is a city nearly twice as large and of modern and substantial architecture. Its business blocks rise in successive and splendid array. The accompanying illustrations are in themselves sufficient evidence of the beauty and imposing character of the architecture, yet they do not show the magnitude of the city. To do this one must come and see for himself. And even then he could not understand the almost incredible change and development that has taken place since that great fire. About the most that could be done before the close of 1889 was to prepare for the improvements that were to follow in 1890.

The following is a list of the more notable buildings, residences excepted, which have been erected. The figures appended are from the architects themselves, and they may be regarded as quite conservative enough:

Hotel Spokane.....	\$ 240,000
Auditorium	300,000
Union Pacific Passenger Depot.....	30,000
Northern Pacific Passenger Depot.....	50,000

Exposition Building.....	\$ 100,000
Smelting Works.....	100,000
High School.....	100,000
Four Public School Buildings.....	80,000
Edison Illuminating Co's Building.....	75,000
Review Building.....	125,000
Spokane University Building.....	20,000
Second Congregational Church.....	18,000
Tidball Building.....	50,000
Bump Building.....	40,000
Forrest & Gandy Building.....	25,000
Hazel Block.....	45,000
Blalock Building.....	125,000
Y. M. C. A. Building.....	18,000
Squire's Building.....	65,000
Pacific Hotel.....	65,000
Squire & Germond Building.....	30,000
Germond Building.....	60,000
Strobach & Munter Building.....	35,000
Daniels, Traut & Chamberlain.....	22,000
Traders Bank Block.....	80,000
Holley, Mason, Marks & Co's Building.....	75,000
First National Bank Block.....	115,000
Spokane National Bank Building.....	90,000
Lindelle Building.....	175,000
Jamieson Building.....	110,000
Bennett Block.....	40,000
Eugene Hyde's Building.....	125,000
Wilson & Essig Building.....	75,000
Green Block.....	22,000
Great Eastern Building.....	125,000
Lauman Building.....	48,000
Van Walkenburg Building.....	75,000
Holland Building.....	65,000
Zeigler Building.....	85,000
Rollin Hyde Building.....	125,000
Granite Block.....	125,000
Rookery Building.....	125,000
Theodore Cushing Building.....	50,000
Sherwood Building.....	110,000

E. L. Powell Building.....	\$ 30,000
The Mohawk Block.....	80,000
The Chemical Block.....	55,000
The Furniture Block.....	65,000
The Riverside Block.....	70,000
Real Estate Block.....	30,000
McLaughlin Building.....	60,000
Lang Building.....	30,000
Temple Court Block.....	80,000
Dodd Building.....	40,000
Frankfurt Block.....	30,000
Daniels Building.....	40,000
Bavaria Building.....	35,000
Braehl Building.....	30,000
Loewenberg Building.....	35,000
Nestos Building.....	25,000
Windsor Building.....	40,000
Howard Block.....	30,000
Delaware Building.....	25,000
Ross Block.....	30,000
Curtis Building.....	30,000
Miller Building.....	50,000
Whitten Block.....	80,000
Eagle Block.....	100,000
Tull Block.....	100,000
Miscellaneous brick buildings.....	200,000
Residences.....	250,000
Total.....	\$5,100,000

The amount credited to "Miscellaneous brick buildings" is probably too low. Scores of others have been erected which are not of sufficient magnitude to deserve separate mention, many of them costing from \$5,000 to \$15,000. One can easily understand that 1890 was a very busy year in Spokane. But we have been doing much more than building houses. We have graded many miles of new streets. We have built one new cable road and one new electric road; the Washington Water-Power Company have spent \$100,000 on new flumes and dams

and other improvements for their water-power; the Spokane & Northern Railroad Company have spent over \$50,000 in improvements for their terminal grounds; the Union Pacific Railroad has spent \$150,000 for the same purpose and the Northern Pacific Railroad has spent \$200,000 in the same way. So much for 1890. What now for the present year? We shall not build so many brick blocks, but we shall build more than double as many residences. We shall see erected extensive works for the manufacture of sewer pipe, terra cotta and fire brick; we shall see the Catholics build the new Gonzaga college which is to cost \$300,000; we shall see the Benedictine Fathers erect the first building of their new university, which is to cost \$100,000; we shall see the city's new sewerage system put in, which will cost \$500,000; we shall see at least \$300,000 spent on grain elevators; \$250,000 laid out in flouring mills; \$300,000 put into new electric roads, and \$150,000 spent by the city for the new Monroe street bridge. These are enterprises and works for which the plans are now complete, and work upon many of them is now in progress. It is more than probable that the amount expended for improvements in 1891 will be far greater than in the wonderful year of 1890. This is the march of real, substantial, permanent progress. Such great sums of money are not laid out in mere "boom" towns. We have passed the era of doubt and uncertainty. Our values are now fixed, and will be maintained and increased as the process of accumulated wealth and business goes on.



"THE SPOKANE."

THE LEADING HOTEL IN THE PACIFIC NORTHWEST. H. C. BOWERS, MANAGER.

DEBTS, REVENUES, TAXES AND MUNICIPAL EQUIPMENT.

THE city of Spokane has just passed from its old Territorial charter to a new one framed in harmony with the provisions of the State Constitution. The city has never yet been bonded and therefore has none but a floating debt. This is in the form of warrants drawn on the city treasury. Of these there are about \$150,000 outstanding. The city owns its own water system, and for the construction of this issued bonds, \$120,000 of which are yet outstanding, but the revenue coming from the water department pays the interest on these bonds and leaves a handsome surplus. No young city in America is in better financial condition than Spokane. Its taxable valuation for 1890 was \$18,750,000; in 1888 it was 8,800,000; in 1887 it was \$3,686,138. Its growth in taxable wealth has therefore been very rapid, almost unprecedented. Under the Territorial law it could not incur a bonded debt; under the new Constitution it can incur a bonded debt for ordinary purposes of five per cent. on taxable valuation, and of five per cent. additional for specific purposes, such as the building of a sewerage system, the erection of water works. But this must be done by a vote of the people. The tax rate for 1890 was fixed at twenty-six and one-half mills for all purposes, city and county, state and school. The regular tax income for the city is estimated at \$180,000, while that for the entire county is estimated at \$250,000. This is outside of

licenses, fees, etc. The county has no bonded debt, and its revenues are ample to meet all current expenses. It is expected that the first bonded debt of the city under the new charter will be created for the purpose of putting in a complete sewerage system, for which plans have been drawn by Captain Symonds, of the United States army, and late Engineer Commissioner of the District of Columbia. The city water works will also be enlarged at an early day. The Holly system of water works is the one now in use. In addition to the protection from fire thus afforded, the city has a fire department with every modern appliance, consisting in part of three Silsby steamers, two Hook and Ladder companies, three Chemical engines, an ample supply of hose carts, and a paid corps of men.

CLIMATE.

PROBABLY the most delightful feature of life at Spokane is the climate. The air has a peculiar, bracing, invigorating quality that is absolutely intoxicating. It has none of the enervating quality which is so marked and disagreeable a feature of the climate of the Mississippi Valley and of the States farther East. The winters are short; the summers are long and delightful. Cold



J. N. GLOVER

B. F. BURCH.

SPOKANE RESIDENCES.

F. R. MOORE.

B. LOEWENBERG

weather usually sets in about Christmas and continues up to March first, lasting nine or ten weeks. Snow usually falls to a depth of one to two feet during the winter period. There is more or less rain throughout the spring season and up to July 1st. About that date the dry season sets in, which generally continues to October 1st, when rains again appear; the rainy seasons are, therefore, in the spring and autumn, but the rains during these periods are never heavy enough to interfere seriously with outdoor pursuits. As a rule, they consist of showers, which last only an hour or so. The laboring men of the city did not lose three days from bad weather between the 15th of March and the 25th of December in 1890. The dry weather of the summer makes harvesting absolutely secure. The heat of the summer is not of the kind which is so much dreaded throughout the East. The rays of the sun are sometimes hot, but it is always cool in the shade and at night. Perhaps there is no more delightful feature of the Spokane climate than these cool nights. One becomes thoroughly refreshed for the labor of the following day. Owing to our northern latitude, the twilight is very long, entire darkness not coming on till after 9 o'clock during the early summer months. While Spokane is not boasted of as a sanitarium for the cure of every ill, yet it is certainly one of the most healthy cities in the world. The following table of comparative death rate, founded on the mortality statistics of a number of cities, is strong proof on the subject:

CITY.	POPULATION.	DEATH RATE PER 1,000
Spokane.....	28,000.....	12.20
St. Paul.....	195,000.....	13.63
Indianapolis.....	100,000.....	15.05
Providence, R. I.....	118,000.....	18.32
Detroit, Mich.....	165,000.....	20.46
Newark, N. J.....	159,432.....	22.59

In this connection it will be interesting to the reader to see the following official statement as to the characteristics of the climate of Washington and Oregon, recently published by Lieutenant John P. Finney, in charge of the United States Signal Service station at San Francisco: "The geographical position of these two States (Washington and Oregon) is a most fortunate one. Located in the latitude of the easterly trend of the Japan current, they receive the full benefit of the warmth and moisture continually rising from this great stream. The atmospheric eddies or areas of low barometric pressure forming over the Japan current enter the continent throughout the year in a manner to provide a most equitable distribution of rain. The relation of the two great States to the Japan current is one of vital importance to their commercial and agricultural interests, and should be clearly understood by the people. Reverse this current, so that its motion in the equatorial regions is westerly, and in the temperate zone easterly, and shift its latitude a few degrees to the south, and the north Pacific coast States would become barren and bleak as northern Canada and Labrador. How great a factor then in the development of a country is the supply

of heat and moisture. The following is a brief summary of the effects of these features of the Japan current: First—A general equability of temperature unequaled in any other portion of the United States. Second—A gradual change from the heavier rains of winter to the lighter rains of summer, giving rise to a moist beneficial distribution of precipitation throughout the year. Third—In the winter the atmospheric disturbances from the Japan current move eastward at a lower latitude than in summer, and this shifting north and south of the storm centers makes the difference in rainfall between the two seasons. But as the change of the centers is not very great respecting Oregon and Washington, these States are always within the area of precipitation accompanying the low-pressure areas. Fourth—A prolific growth of all forms of plant life. Fifth—Climatic conditions which favor to a marked extent the growth of most cereals and other important staple crops. Sixth—The alternation of rain and fair weather in such a manner as to provide most suitable conditions for planting and harvesting. Seventh—The absence of excessively violent storms, owing to the southwest deflection of the Japan current at the parallel of forty-five degrees north; the cold Alaskan current along the California coast, and the dry atmosphere of the middle plateau region. Eighth—Computed from the records of nearly twenty stations, covering a long series of years, the percentage of rainfall in Washington varies

from 2.05 per cent. in August to 15.70 per cent. in January. Ninth—Computed from the records of twenty stations, covering a long series of years, the percentage of rainfall in Oregon varies from 1.25 per cent. in August to 17.10 per cent. in December.”

THE SPOKANE MINING EXCHANGE.

THE Spokane Mining Exchange was organized on May 20, 1890. It began business with a capital stock of \$50,000 divided into 500 shares at \$100 each.

The association occupies a room 25x60 in the Hotel Spokane building, where ores and minerals from the tributary mining districts are carefully arranged and neatly labeled. A visitor in a few moments can obtain an excellent idea of the city's permanent mineral wealth.

The different ore samples are numbered and a corresponding number is placed on each filing; thus a would-be purchaser can examine the ore and obtain a description of the property, without the interference of a third party.

The Exchange is in a flourishing condition. Its benefit to Spokane and the county at large is considerable, and acknowledged by all. Any inquiries regarding mines or minerals in this portion of the Northwest, addressed to Mr. J. C. Fisher, the Secretary, will receive prompt attention.



B. C. VAN HOUTEN.

S. OPIENHEIMER.

SPokane RESIDENCES.

JAY P. GRAVES.

H. L. CUTLER.

WATER-POWER.

I WILL introduce this chapter with a quotation from a report made in the early part of 1890 by Col. J. T. Fanning, formerly chief engineer of the St. Anthony Water-Power Company of Minneapolis, now consulting engineer of the Great Northern Railroad, and a gentleman of eminent standing in his profession, stating first that the water-power of Spokane Falls is derived from the Spokane River, which flows directly through the city out of Lake Couer D'Alene, thirty miles distant.

“The city of Spokane is situated on the eastern margin of the broad Washington prairie. This prairie has an annual rainfall of about twenty inches, but the water-shed of the river above the falls is chiefly a mountainous area sloping toward the west. These mountain slopes condense more moisture borne by the prevailing westerly winds from the Pacific ocean than does the plain. The depth of the annual rainfall upon the water-shed of the river may safely be estimated as averaging twenty-four inches for the whole year. This water-shed embraces part of Washington, part of Idaho, and a small area of Montana, and measures about 4,500 square miles. The beautiful Couer D'Alene Lake in Idaho receives the greater part of this drainage from the St. Mary's, St. Joseph and Couer D'Alene Rivers, and it acts as a vast storage reservoir to equalize the flow of the river during the entire year, storing up the vast volumes of water

brought down by the melting snow in the spring to feed the flow of the river during the succeeding months when the rainfall on the lower part of the water-shed is very light. This lake has an area of about sixty-nine square miles, according to the survey of Lieut. Hayden of the United States army.

“This natural storage is a very important factor in determining the value of the water-power of the Spokane River, and should the time come when the demand for power exhaust that which can be supplied by the present natural low water flow of the river, a dam placed across the mouth of the lake would greatly increase its storage capacity and so add to the low-water flow of the river, increasing its volume very materially. The water-power of Spokane has natural divisions made by the several islands occurring in the stream, thus making the development of the water-power a comparatively easy proposition, and also distributing the power sites over a large area of territory, giving ample space for the construction of mills and factories which use the power.”

The Spokane river is a clear, rapid stream, that flows over a rocky bed. It is fed by numerous springs all along its course, and never freezes over in winter, nor does it ever become muddy or clogged with drift-wood. Its variation in rise and fall is only about eight feet, and it has therefore never been known to overflow its banks.

No stream is better adapted to the production of a steady and reliable power the year around. When Col. Fanning measured it at its lowest flow in 1889 it was carrying 2,000 cubic feet of water per second. Its minimum power has been placed at 30,000 horse-power. The Falls extend about half a mile, and there is a total decline of about 130 feet. In this distance there are two principal falls where most of the power is developed. Both these principal falls are over graduated inclines, thus offering an opportunity for fluming, and giving ample room for mills and factories. The water-power of the Spokane river is undoubtedly the key to the city's first and greatest prosperity. The people saw in this the secret that could in the future bring hither great manufacturing establishments which could be operated at a far less cost than by the use of steam or any other motive power. The St. Anthony water-power of the Mississippi River is the pivotal influence in the growth of Minneapolis, a city of nearly 200,000 inhabitants and the largest flour-producing city in the world. Yet Minneapolis has today a developed water-power of only 20,000 horse-power. The practical results of Spokane's great water-power are already apparent. From it is supplied the power to operate all the flouring mills of the city, all the saw-mills of the city, two cable railways, three electric railways, forty electric motors, the pumping machinery of the city water works, and the entire electric lighting plant of the city. The application of water-power to electric lighting has already been developed to a higher point of both efficiency and magnitude in Spokane than

in any other city in the Union. A new station is just now completed for the Edison Illuminating Company, by the Washington Water-Power Company, from which will be supplied 12,000 incandescent lights and 1,200 arc lights. This will require 2,700 improved horse-power. The station has cost \$75,000. Its full capacity will not be required at once, though it begins operations with 7,500 incandescent and 500 arc lights. Spokane is now the best lighted city on the Pacific coast, if not in the world, and its light is supplied at a less cost than in either Boston, New York, Chicago, Philadelphia, or any other large city. I have taken the pains to gather some facts showing the great saving accomplished in the use of water-power as applied in this city. The following is a letter from Henry A. Herrick, Esq., engineer of the Washington Water-Power Company, and a gentleman of eminent standing in his profession.

J. R. REAVIS, Esq.

Dear Sir: I have made an approximate estimate of the cost per year of 1,000, 5,000 and 20,000 horse-power, developed by water-power, assuming the conditions the same as those which govern here at Spokane, and submit the following figures.

Very truly yours,

HENRY A. HERRICK, Civil Engineer.

COST OF DEVELOPING 1,000 HORSE-POWER ON A FALL OF 70 FEET.

Dam,	-	-	-	-	-	-	-	\$25,000
Masonry for gates and racks.	-	-	-	-	-	-	-	8,000
Gates and racks,	-	-	-	-	-	-	-	2,000
500 feet of 7 foot steel penstock in place,	-	-	-	-	-	-	-	6,500
8-15" turbines set up complete,	-	-	-	-	-	-	-	8,000
Shafting, belting, etc.,	-	-	-	-	-	-	-	2,000
Power house (brick and stone),	-	-	-	-	-	-	-	38,000
								\$81,500



ANNUAL EXPENSE ON 1,000 HORSE-POWER.				
Water at \$5 per horse power per year,	-	-	-	\$5,000
Interest on investment at 8 per cent.,	-	-	-	6,460
Depreciation of plant at 5 per cent.,	-	-	-	4,075
Attendance, oil, etc.,	-	-	-	3,000
<i>Total cost of 1,000 horse-power per year,</i>				\$18,535
<i>Equals \$18.53 per horse-power per year.</i>				

COST OF DEVELOPING 5,000 HORSE-POWER ON A FALL OF 70 FEET.

Dam,	-	-	-	\$25,000
Masonry for head gates and racks,	-	-	-	14,000
Gates and racks,	-	-	-	6,000
3-10 foot steel penstocks, 500 feet long,	-	-	-	30,000
Turbines ready to run,	-	-	-	25,000
Shafting, belting, etc.,	-	-	-	7,500
Power house (brick and stone),	-	-	-	60,000
				\$167,000

ANNUAL EXPENSE ON 5,000 HORSE POWER.				
Water at \$5 per horse-power per year.	-	-	-	\$25,000
Interest on plant at 8 per cent ,	-	-	-	13,400
Depreciation of plant at 5 per cent.,	-	-	-	8,375
Attendance, oils, etc.,	-	-	-	6,000
<i>Total cost 5,000 horse power per year</i>				\$52,775
<i>Equal to \$10.50 per horse-power per year.</i>				

COST OF DEVELOPING 20,000 HORSE POWER ON A FALL OF 70 FEET.

Dam,	-	-	-	\$ 25,000
Masonry for head gates, and racks,	-	-	-	30,000
Gates and racks,	-	-	-	12,000
12-10 foot steel penstocks, 500 feet long,	-	-	-	120,000
Turbines ready to run,	-	-	-	100,000
Shafting, belting, etc.,	-	-	-	25,000
Power houses (brick and stone),	-	-	-	250,000
Incidentals,	-	-	-	50,000
<i>Cost of plant</i>				\$612,000

ANNUAL EXPENSE ON 20,000 HORSE-POWER.				
Water at \$5 per horse power per year.	-	-	-	\$100,000
Interest on plant at 8 per cent ,	-	-	-	48,960
Depreciation of plant at 5 percent ,	-	-	-	30,600
Attendance, oils, etc.,	-	-	-	20,000
<i>Total cost 20,000 horse-power per year,</i>				\$199,560
<i>Equal to \$10 per horse-power per year.</i>				

After figuring in the entire possible cost, Mr. Her-
rick concludes that where 1,000 horse-power is used, it
will cost \$18.50 per horse-power; where 5,000 is used it
will cost \$10.50 per horse-power, and where 20,000 is
used it will cost \$10 per horse-power. The average
cost of steam-power in the United States may be placed
at \$50 per horse-power per year. Mr. Herrick places
the highest cost of water-power as developed here at a
little over \$18 per horse-power per annum, so that there
would be, in the use of a 1,000 horse-power, a saving of
\$32 on each horse-power per annum, or a total saving of
\$32,000. On the use of 5,000 water horse-power, the
cost being \$10.50 for each horse-power per annum, there
would be a saving of \$39.50 per horse-power, or a total
saving of nearly \$200,000. The total amount of power
now being used from the falls of the Spokane River is
about 3,000 horse-power. On this there is an annual
saving over steam of at least \$35 per horse-power, or an
aggregate of \$105,000 per annum. When we shall use
10,000 horse-power we shall save an aggregate of
\$400,000, and when we shall use 20,000 horse-power we
shall save an aggregate of \$800,000 every year. Now, I
think I have very clearly demonstrated what the power
of the falls of the Spokane River is worth to the city, and
what a great factor it must be in the development of
industrial enterprises, prosperity and wealth.

WHEAT PRODUCT.

OUR next step will be to look with some detail into the products of the territory contiguous to Spokane, and from which the wealth of the future is to be derived.

First, let us take up the wheat product. According to the United States government report issued in September, 1890, Washington leads all the States in yield per acre of wheat. The average of this State is twenty-three bushels per acre. This is three bushels per acre higher than that of any other State, Montana being second, but with a total yield of insignificant proportions, and Montana doubles the yield of the celebrated wheat growing States of North and South Dakota, the average in which States was found to be nine bushels per acre. The average in States like Iowa, Illinois, Nebraska and Kansas is about fifteen bushels per acre. The wheat areas contiguous to Spokane are in eastern Washington and northern Idaho. The principal district is known as the Palouse country, and begins at a point about five miles south of Spokane, in Spokane county, and spreads out like a fan toward the south, southwest and southeast, covering portions of northwestern Idaho. This district has an average width of fifty miles, and is about 150 miles long, containing therefore about 7,500 square miles, or nearly 5,000,000 acres.

About one-fifth of this land is under cultivation, and about one-tenth of it was devoted to wheat last year, with

an average yield of thirty bushels per acre, making a total amount of 15,000,000 bushels. At least 8,000,000 of this was grown in the single county of Whitman, which adjoins Spokane county on the south. The Palouse is undoubtedly the most prolific wheat growing country in America. The soil is loose and spongy, and of volcanic origin. The rainfall is about twenty-eight inches per annum, which is supposed to be hardly enough for wheat, but the soil has a wonderful power of retaining moisture, and excellent crops of wheat have been grown where there was not a drop of rain from seeding to harvesting. Harvesting is effected easily and certainly. No rain falls during the harvest period, so that wheat is never endangered by bad weather.

The Palouse country has been but recently settled. Nearly every foot of the land is available for cultivation. It is rolling prairie, with an abundance of timber in the neighboring mountains. It is reasonable to estimate that within five years 2,000,000 acres of this land will be given up to wheat growing. This, with an average of twenty-three bushels per acre, would produce 46,000,000 bushels of wheat per annum. As a matter of fact, the yield per acre is very much larger. The government reports, upon which the twenty-three bushel per acre average was based, are made up from all over the State, some districts being included that are not very heavy producers. The



THE WHEAT BLOCKADE
IN THE PALOUSE COUNTRY.



average for last year in the Palouse country is certainly thirty bushels per acre, and there are many well authenticated cases where the yield ran up to fifty, sixty and eighty bushels per acre. The product of a single acre of wheat from near Pullman, in the Palouse country, was found by actual measurement to be 101 sacks, containing a bushel each, and was exhibited at the Northwestern Industrial Exposition held at Spokane in October of last year.

Another extensive wheat growing district lies west of Spokane, and is known as the Big Bend country. It begins within about twelve miles of Spokane, and extends to the Columbia River. A glance at the map of Washington will show you that the Columbia River flows south from British Columbia almost directly toward Spokane, but that at a point about eighty miles from the city it makes a wide detour toward the west, then again takes a southerly course, then turns east again, and finally flows off in a southwesterly direction to the Pacific Ocean.

The name, Big Bend, comes from the detour made by the Columbia west of Spokane. The Big Bend country incloses the counties of Franklin, Adams, Douglas and Lincoln. Douglas, of which Waterville is the county seat, is the largest of the four. It and Franklin county are situated on the eastern bank of the Columbia River. Franklin county has only about nine inches of rainfall a year, and its lands can never be profitably cultivated except by irrigation. Its surface is almost wholly covered by

sage brush, but its soil is rich, and, under the influence of irrigation, is very prolific. A portion of Adams must also be irrigated to be of agricultural use. About 300,000 acres will produce good crops without irrigation. The southerly part of Douglas county is much like Adams and Franklin, and must be irrigated if it is employed in agriculture, but the middle and northern portions of the county do not need irrigation and are very productive. No railroad as yet runs to the interior of this county but it has a considerable population of thrifty farmers. The average yield of wheat for 1890 was 30 bushels per acre; in 1889, a very dry year, 22 bushels per acre, and in 1888, 30 bushels per acre. There has not been a crop failure in eight years, the period of the county's settlement. Little Club is the favorite of wheat grown. It requires only a half bushel per acre for seeding, while in the Eastern and Middle States from one bushel and a half to two bushels are required. The advantage in favor of Douglas county land lies in the more prolific character of the "stooling" of the wheat grown there, fifteen straws generally growing from one hill and each hill producing from 47 to 50 grains. Another advantage of the Little Club wheat grown is that it does not shatter after being cut, but will lie on the ground for weeks in dry weather without any appreciable loss. As a result of a very careful examination made by United States land officials, it is estimated that there are 676,000 acres of wheat land in Douglas county that does not require irri-

gation. This will produce on an average 28 bushels per acre, or an aggregate amount of 18,800,000 bushels per annum. It is hardly probable, however, that so much of the county's area will ever be given up to wheat growing, as pasturage and miscellaneous farming will occupy half of these 676,000 acres of land. A reasonable estimate is, that in five years the county will be producing 5,000,000 bushels of wheat per annum. Only about 50,000 acres are now under cultivation, and there was about 25,000 acres of new sod broken last autumn and this winter, making 75,000 acres to be put down in crops this spring. Of the first-class land not yet taken up about 380,000 acres of Government land remains that may be entered in the regular way. The United States land office, not only for Douglas county, but Okanogan county as well, is at Waterville.

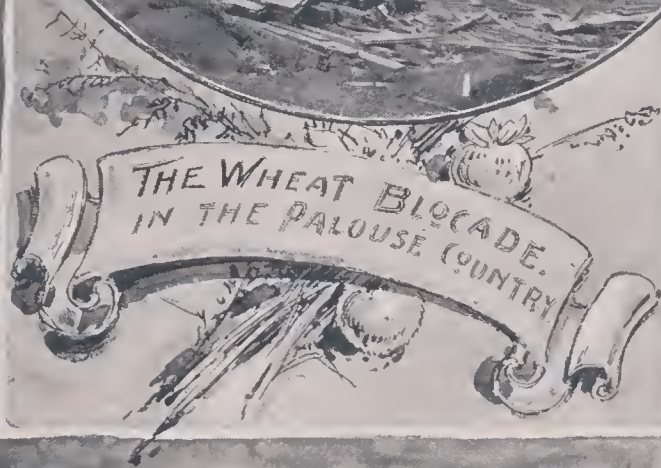
Lincoln county lies east of Douglas, adjoining Spokane county on one side. Its soil is very much like that of Douglas. It has about 80,000 acres under cultivation and about 600,000 acres in all that is suitable for wheat growing. Lincoln, Douglas and Adams combined have about 1,500,000 acres of wheat land that does not require irrigation, and if there is a good market for the product, these three counties will be producing from 10,000,000 to 12,000,000 bushels per annum in five years. This, I am sure, is a very conservative estimate. I should not be surprised if the product is 15,000,000 bushels. It is

apparent that here will be something for the railroads to do. The marketing of 10,000,000 bushels of wheat means the employment of 22,000 cars, allowing 450 bushels to the car.

Two lines of railroad extend from Spokane throughout the Palouse country, the Union Pacific and the Spokane & Palouse. Two railroads also extend from Spokane into the Big Bend country, the Washington Central and the Seattle, Lake Shore & Eastern; Spokane is therefore a center into which the wheat from these districts can be quickly and inexpensively transported. The making of flour, both for domestic consumption and foreign export, will no doubt be one of the leading industries of the city. We have a water power capable of developing 30,000 horse-power, at the minimum. We can make flour cheaper in Spokane than anywhere else on the Pacific coast. We are just now making a beginning. The total output of our mills is now about 700 barrels per day, but it is proposed to enlarge our flouring plant greatly during the next two years. An attempt was made last autumn to ship the wheat of this country both east and west to find a market, but the magnitude of the crop has paralyzed the railroads, and a severe blockade existed for many weeks.

The natural function Spokane has to perform under this state of affairs, which is subject to repetition every

200,000 BUSHELS
AWAITING TRANSPORTATION



175,000 BUSHELS
AWAITING TRANSPORTATION



200,000 BUSHELS

year, is to grind a great portion of this wheat product into flour.

Just why this is so may be briefly summed up as follows:

First. We have ample and cheap water-power to run the mills.

Second. We can get a market for all the flour we can make, at home or abroad; the greater the product, the better our market, according to the law in trade: that great producing centers are an advertisement in themselves and create a momentum of their own. Minneapolis is known as a flour producing center, therefore the world goes to Minneapolis for flour. We shall never make more flour in Spokane than we can sell. The more we make the better we shall be known as a source of supply.

Third. We can have better control of freights from a common and influential center like this than could be had from weak and scattered points in the wheat growing district. In other words, we can get better rates on flour out of Spokane than a shipper at any point in the Palouse country can get on wheat, because we have a larger product for shipment, because it is a more regular and concentrated form, because we have more general influence, and because we have better methods of making that influence effective.

Fourth. There would be no lack of transportation facilities. There would be a short haul from all the wheat growing districts to Spokane. While it would take ten days to get a train load of wheat from a point in the Palouse country to Duluth, it would take but a few hours to get it from there to Spokane. Look at the saving of time, of cars, and of motive power.

As to the securing of cars for the shipment of flour from here to the seaboard, we will take care of that, or rather that will take care of itself. There need be no uneasiness whatever on that point. This is a matter that rights itself as business increases. We have now shown what the wheat product of the region tributary to Spokane is, and what it may be. Any observer can easily understand what a flow of wealth must eventually come from the presence of so great a natural product. The farmers of this region received from five to six million dollars for the wheat they sent to market last autumn. If it had been transported promptly, they would have received more. The effect of so large a sum of money coming into a country every year will be very perceptible in the improvement of farms, the increase in better breeds of stock, the building up of towns and villages, and the consequent increase in all lines of business in the trade center and metropolis.

MINERAL RESOURCES AND SMELTING WORKS.

PERHAPS the greatest single element of Spokane's wonderful growth and prosperity is the proximity of great mining lands. These are scattered over a wide area of country, and are on almost every side of the city. We discover here an unequaled combination of mineral and agricultural wealth. There is not another portion of the United States where mining lands of so rich and extensive a character are to be found. I have already pointed out the wealth of our wheat product, and I shall now attempt to give a reasonable and conservative account of our tributary mines. There are seven well defined mineral districts within 250 miles of Spokane, three of them within 150 miles, and the leading one within 100 miles. These are the Cœur D'Alene district, the Seven Devils district, the Metaline district, the Colville district, the Okanogan district, the Kootenai district, and the Silver Creek district.

The Cœur D'Alene district is east of Spokane, about eighty miles distant, and is the oldest and best developed of all the districts named. Placer mining was formerly carried on there to a very great extent, but this has been to a great degree abandoned in favor of lead and silver mining. It was discovered a few years ago that galena ore existed here in great bodies, and since the development work has been very rapid and extensive. The output of ore for 1889 amounted to about \$2,000,000; for 1890 it was nearly double that amount. The value of the principal mines last year was about as follows:

Gold Hunter, at Mullan	\$ 250,000
Morning Mine, at Mullan	300,000
The Gem, on Canyon Creek	290,000
The Granite, on Canyon Creek	400,000
The Poorman	1,000,000
The Tiger	600,000
Helena and Frisco	300,000
Custer, on Nine Mile Creek	300,000
California, on Nine Mile Creek	80,000
Emma and Last Chance, at Wardner	300,000
Sierra Nevada, at Wardner	250,000
Stem Winder	100,000
Partially developed mines	100,000
	\$4,270,000

The Bunker Hill and Sullivan, one of the largest mines, was not producing last year, owing to the putting in of extensive concentrating works. It has a capacity of at least \$1,000,000 gross, per annum. The capacity of the Custer and the Morning is also to be greatly increased. About \$500,000 worth of machinery and development work were put into the Couer D'Alene district last year, and the output will be more than double in quantity and value this year. The ore shipments now run from 300 to 500 tons a day. Smelting works have been erected at Spokane, and it is proposed to treat at least a portion of this ore here. Two railroads run from Spokane into the Couer D'Alene district, the Couer D'Alene branch of the Northern Pacific, and the Washington and Idaho branch of the Union Pacific. Spokane is the principal supply point of these mines, and has been greatly benefited by the trade arising from them. They are largely owned by



Spokane people, and the enrichment of these owners is in a manner the enrichment of the city. The Couer D'Alene country is but in its infancy. Accurate surveys show it to possess phenomenal wealth. Many flourishing mining towns are growing up, and a large and wealthy population will soon be established there. The great mines mentioned above are in an area only thirty by eight miles in extent. Second to the Couer D'Alene district in development and paying mining properties is the Kootenai district. This is in British Columbia, about fifty miles over the line, and about 175 miles from Spokane. Though in British Columbia, these mines are owned and operated mainly by citizens of the United States, and the ore output that comes from them will necessarily come into this country to find treatment and a market. The Kootenai district is subdivided into two smaller districts, the Warm Spring district and the Toad Mountain district. Both are near Kootenai Lake, upon which there is a good steamer transportation. The ores of the Warm Spring district are generally lead, bearing silver. The following is a statement of the most promising ore bodies yet discovered :

NAME OF MINE.	CHARACTER OF ORE.	ASSAY VALUE OF SILVER PER TON.
Skyline	Black sulphate and native silver.....	\$ 100 to \$14 000
United	Galena and native silver.....	35 to 13 501
Keno	Galena and wire silver.....	40 to 900
Neos'ho	Wire Silver, ruby and black sulphate.....	40 to 5 000
Fourth of July	Galena and carbonate sulphate.....	40 to 500
No. 1	Block sulphate wire and native silver.....	30 to 2 000
Little Donald	Galena and block sulphate.....	35 to 400
Spokane	Galena.....	35 to 40
Gallagher	Carbonates, iron and oxide.....	35 to 400
Union	Carbonates and galena.....	30 to 600
Alex	Carbonates and galena.....	40 to 150
Dellie	Carbonates and iron oxide.....	35 to 400
Sunlight	Galena and carbonates.....	40 to 175

Some very rich discoveries have been made in the Toad Mountain district. The locations have been made in or about Toad Mountain, hence the name of the district. Assays of the Silver King, one of the principal mines here, run from 80 to 1,000 ounces in silver, and from 10 to 35 per cent. in copper; of the Grizzly Bear, from 40 to 300 ounces in silver, and from 5 to 25 per cent. of copper, and of the Dandy from 30 to 600 ounces in silver and from 5 to 15 per cent. of copper. The Toughnut gives assays of 40 to 100 ounces of silver per ton.

A great deal of work is being done in the Toad Mountain district this year and thousands of tons of ore have been taken out and now await shipment. The entire Kootenai district is without means of transportation, but the Spokane & Northern railroad is being rapidly built from Spokane in that direction, 125 miles having already been completed. The present northern terminus is at Little Dalles on the Columbia River, and boats are being constructed to run from that point, in connection with the road, to Sproat's landing, fifty miles above, where connection will be made with a short line of railway running out to the Toad Mountain district and Kootenai Lake. As soon as the Canadian Parliament gives permission, the Spokane & Northern road will be built to Nelson. The present arrangement, however, will enable shippers to send considerable quantities of ore to the smelting works at Spokane.

The Spokane and Northern railway is essentially a Spokane road, and will command almost the entire product of the Kootenai district. The Colville district

extends from the Little Dalles, the upper terminus of the Spokane & Northern, to Chewelah, a point on that line a few miles south of the town of Colville. There are some very promising mines in this district, and considerable shipments of ore have been made this year. Much development work has been done, and the output of ore for 1891 will be greatly increased. All this ore will come to Spokane for treatment and for a market.

The Metaline district is on the Pend d'Oreille River, about twenty miles east of Colville. Communication will be had by a branch of the Spokane & Northern road, in whose territory it lies. The ore is a rich galena. Two of the principal mines are the Blue Bell and the Lake View. The ore from the former runs from \$2 to \$8 in silver per ton, with 70 per cent. of lead, while that of the latter runs 60 per cent. of lead. It is essentially a lead-bearing district.

The Okanogan district is northwest of Spokane, about 160 miles, and as yet has no railway communication. Some of the mines have been worked to a considerable extent, and some of the ore is rich enough to bear wagon transportation nearly 100 miles.

The principal mines are the Fourth of July, whose ore is silver in quartz, worth from \$50 to \$2,500 per ton; the First Thought, whose ore is silver and lead worth from \$40 to \$700 per ton, and the Arlington, whose ore is silver in quartz, worth from \$30 to \$300 per ton. Surveys have been made this year for a line from the Spokane & Northern road across the Colville Indian Reserva-

tion into Ruby City, the central point of the Okanogan district, and this line will certainly be built next year. The Washington Central will also go to Ruby City next year. The Silver Creek district lies just over the crest of the Cascade range on the west side, near Cady Pass, and will be near the line of the Great Northern railroad running from Spokane to Puget Sound. It is a new district, but is very rich in silver ores. Work is being carried forward here with great vigor, and it is expected that shipments of ore will begin next spring to the smelting works in Spokane.

The Seven Devils district is about 250 miles south and a little east of Spokane in the State of Idaho. The ore is very rich in copper, and great activity now exists there, but, so far, there has been established no means of transportation owing to the rough character of the country.

This completes a hurried survey of the mining districts tributary to Spokane. It was because of our great mining resources that the Northern Pacific Reduction Company concluded to establish extensive smelting works at this point. These works are now completed, and will be in full operation soon. The company was formed in New York with a capital of \$1,000,000. The citizens of Spokane contributed, by guaranteeing the cost of a railroad from the city to the site of the plant, a distance of about five miles. Col. R. G. Ingersoll, of New York, is president of the Reduction Company; Mr. James H. Breslin, of New York, vice-president, and Mr. J. N.



Baker, of New York, secretary. Practical operations here were entrusted to Mr. Frederick Burbidge. The work of construction began last summer, and has gone on uninterruptedly ever since. The Reduction Company have erected eleven or twelve buildings altogether. There is a building for the roasting furnaces, 70x90 feet in size; ore bins, 30x50 feet; sampling house, 30x60 feet; coke storage house, 40x50 feet; charcoal storage, 40x50 feet; three bedding floors, 40x40 feet each; charging floor and furnace room, 30x60 feet; blower house, 25x30 feet; engine and boiler room, 25x30 feet; blacksmith and carpenter shops, 20x50 feet; general office building, 22x39 feet; tank building, capacity 30,000 gallons. There are two water jacket blast furnaces and two reverberatory roasting furnaces, the latter being seventeen feet wide and seventy feet long. There are two Root blowers, one 100 horse-power engine, and two boilers, 14x60 feet each. There are two smoke stacks, one 120 feet high and about twenty feet square at the base, the other one, a smaller one, seventy feet high, and a dust chamber 140 feet long. There is the necessary crushing machinery, a single piece of which weighs nearly ten tons, and all the other equipments belonging to smelting works of the latest design. The railroad runs immediately by the ore bins on one side and by the roasting furnaces on the other. The works have been built on a gradual decline, so that the ore is taken down to the blast furnaces by gravity, thus avoiding much expense of handling. It will not be inappropriate to

recount here some of the salient advantages of Spokane as a smelting center.

First. It is the focal point of a system of railroads that now extend to all the ore producing districts in this region, with one or two exceptions.

Second. Generally speaking, it will cost 75 per cent. less to ship the ores of our mining districts to Spokane than to any other smelting point worth consideration.

Third. Our lead ores are now shipped to Eastern smelters. Roughly speaking, four tons of ore that carries 25 per cent. of lead will produce one ton of bullion. Therefore, instead of shipping four tons of ore to our Eastern market, we will ship one ton of bullion, thus saving heavy freight charges.

Fourth. On "dry" or non-lead producing ores, the saving will be far greater for the bullion produced, and will be of no appreciable weight. There is an offset to these advantages in the greater cost here of treatment of ores, from the higher price of labor, fuel, and general supplies, but making due allowance for all this, there still remains a net saving in favor of Spokane as a smelting center. It will not be long until the Northern Pacific Reduction Company will make an effort to prove the truth of this assertion. They have already expended about \$100,000, and have thus given an earnest of the sincerity of their efforts. The works will have a capacity of 150 tons per day. The industry thus created will be the largest and most important of the kind on the Pacific coast north of San Francisco.



THE SMELTING WORKS OF THE NORTHERN PACIFIC REDUCTION CO. AT SPOKANE.

MISCELLANEOUS PRODUCTS.

I CAN do no better under this heading than to quote from the official report made upon several county exhibits made at the Northwestern Industrial Exposition held in this city during October of last year. These quotations, as will be seen, refer mainly to agricultural, horticultural, and vegetable exhibits.

The counties referred to are Spokane, in which the city of Spokane is situated; Whitman, of the Palouse country, which adjoins Spokane on the south, and Lincoln and Adams, which are situated to the west and southwest of Spokane, the former adjoining Spokane county in the Big Bend country.

SPOKANE COUNTY.

J. H. Butler, of Moran prairie, made a fine exhibit of fruit; thirty-six varieties of apples, four of pears and five of plums, together with clippings of Marlborough Mulberry, preserved fruits, etc.

M. F. Chesman, from his fruit farm two miles east of the city, exhibited sixteen varieties of apples and two of pears.

J. R. Strong, of Five Mile Prairie, several varieties of apples and pears, some samples of grain and ten varieties of vegetables.

W. W. Hayward, from three miles north of Fairfield exhibited three turnips weighing 44 13-16 pounds; three rutabagas, 51 5-16 pounds; eight onions, 12 9-16 pounds.

J. F. Weger, from Bellores farm, preserved fruits, fifteen varieties of apples and four of pears.

W. Buckmaster presented a sample of Canada Blue potatoes. He paid one dollar for two seeds, from which he planted forty hills. He raised 575 bushels the first season with only usual cultivation.

Crodner's fruit farm, 14 miles east of city, made a fine display of 32 varieties of apples and samples of other fruits.

J. J. Stage, of Pleasant View, 1 1-4 miles from City Postoffice, made a splendid display of fruit; twenty-three varieties of apples, three of prunes and six of pears.

WHITMAN COUNTY.

The Whitman county exhibit was essentially an agricultural one, eight spaces being secured for the purpose of showing it to advantage. Less than ten days were occupied in making the collection, and the commissioners displayed great enterprise in making it so complete as to show all the varieties of products of that wonderful county. Of fruits there were all varieties; seventy



A FEW SPECIMENS OF THE PRODUCTS OF WASHINGTON

of apples, nine of pears, four of plums. Two hundred and sixty-one acres of wheat show a yield of from 50 to 75 bushels per acre. A phenomenal crop from one measured acre was 101 measured bushels, exhibited by E. J. Northcutt of Pullman. Another acre showed 86 1-6 bushels exhibited by T. W. Savage. John Munson vouches for 5,050 bushels on 130 acres. Paul Beckmier had 69 acres from which he harvested 2,391 bushels. H. B. Lyon sent one stack of wheat containing 243 stems from one kernel. Three varieties of oats show an average yield of from 60 to 90 bushels per acre. Fine barley samples average 50 to 60 bushels. Several varieties of corn, one of yellow dent twelve feet high. One field, eight acres of corn yielded 100 bushels per acre; one of ninety-four acres, 40 bushels; another of seventeen acres, 45 bushels.

Of the miscellaneous grains, grasses, etc., on exhibition may be mentioned broom corn, sorghum, bunch grass, wild rye, gourds, millet, hops, blue grass, purple top, canary seed, golden winter millets and cheat, red top, timothy, tobacco, wild rye, Alfalfa first and second crop, red clover, hemp and flaxseed. Vegetables are not neglected in this prolific section of our State.

The following is the yield per acre of some of the vegetable exhibits:

Early Rose potatoes, 11 acres, 710 bushels per acre; Palouse Seedling potatoes, 11 acres, 578 bushels per acre; Yellow Danver onions, 800 bushels per acre; Silver Skin onions, 650 bushels per acre.

ADAMS COUNTY.

The following is a tabulated statement of grains exhibited by Adams county:

Variety of Grain.	Character of Land.	Acres.	Average Bushels per Acre.
Blue Stem wheat.	Upland sod.	56	26
White Side oats.	" " " " " "	70	25
Blue Stem wheat.	" " " " " "	120	46
Little Chub wheat.	" " " " " "	80	42
Red Chaff wheat.	" " " " " "	70	27
Red Furst wheat.	" " " " " "	145	23
White Shannon oats.	" " " " " "	200	22
Blue Stem wheat.	" " " " " "	13	28
Washington Blue Stem.	Bottom land.	40	92½
Blue Stem wheat.	Upland sod.	70	23
Shannon barley.	" " " " " "	90	23
Blue Stem wheat.	Volunteer crop.	40	26
Blue Stem wheat.	Upland sod.	50	52
Blue Stem wheat.	Volunteer crop.	40	26
White Side oats.	Summer fallow upland.	70	36
White oats.	Upland sod.	60	57
White Shannon oats.	Summer fallow upland.	53	75
Blue Stem wheat.	Upland sod.	80	43
White Shannon barley.	Summer fallow upland.	151	49
		45	62½

LINCOLN COUNTY.

The following displays were made by Wilbur:

Wheat showing an average yield of from 38 to 51 bushels per acre; oats 51 bushels. Other cereals, such as millet, barley, rye and corn, were shown.

H. S. Wynhoff exhibited one lot of 17 potatoes taken from one hill, the weight of which was 18 pounds.

Mr. Henderson showed one potato weighing 17 ounces.

C. Irwin had one sample of millet 4½ feet high with heads 16 inches long.

F. Benson, samples of rye hay cut June 13th, 11 acres, which yielded 25 tons. Four acres of wheat averaged 7 to 7½ feet high.

All of the vegetables exhibited were of fine size and all varieties.

The following exhibits were made by Sprague in the same county :

Mr. B. B. Glasscock exhibited five jars of various grains, Red Chaff wheat, 350 acres, averaging 35 bushels ; Blue Stem wheat, 420 acres, 30 bushels ; White oats, 70 bushels ; Cheveleir oats, 360 acres, 40 bushels ; White barley, 100 acres, 40 bushels.

John Chandler, one field of 28 acres barley, 50 bushels ; other varieties of grain ranging from 20 to 65 bushels per acre. Timothy grass three tons per acre.

W. H. Dewey exhibited 215 spears of wheat from one kernel.

Mrs. Ryan exhibited 100 spears of wheat from one kernel.

Samples of bunch grass and second growth of wheat were to be seen.

J. H. Overshaw exhibited samples of barley, raised in a nine-acre field, the total yield being 802 bushels.

Similar reports were made upon Stevens, Douglas and other counties of eastern Washington. The above extracts are quoted to show the kinds and quantities of

grass, vegetables and fruit produced in the region adjoining and tributary to Spokane. Other products in abundance not mentioned here are, fire-clay, potter's clay, marble, white sand, mica, mineral paints, limestone, iron ore and architectural granite. These products are to be found in inexhaustible quantities within fifty miles of Spokane.

There is a mountain of granite nine miles north of the city from which the government works at the Cascade Locks at the Columbia are supplied, and from which blocks weighing seven to ten tons are easily cut. The finest fire-clay and potter's clay have been found fourteen miles from the city, and from these banks extensive pottery, terra cotta and fire-brick works in the city now draw their supply. A very large deposit of bog iron has been found eighteen miles from the city. One of the most noticeable exhibits at the late Exposition was that of some white sand from a point on the Spokane River some miles below the city, while six varieties of mineral paint clay from a point twenty-five miles north of the city on the Spokane & Northern railroad were shown. Deposits of both mineral paint clay and white sand are very extensive.



AN ORCHARD SCENE IN SPOKANE.

RAILROADS.

SPOKANE now has seven railroads, and on these seven roads sixteen passenger trains come and go every day. More railroads center here, more trains come and go from here every day, than from any point west of St. Paul and Minneapolis, not excepting Portland, Tacoma or Seattle. Spokane is not only the great railroad center of the Columbia River basin, but it is the great railroad center of the upper Pacific Coast. The railroads have been a mighty factor in making Spokane what it is. They have opened up to us a wide extent of territory and brought us its trade. They have populated this surrounding territory and made its trade of value. They have given us an outlet to the seaboard both east and west, and put us in the midst of the highway of the world's overland traffic.

The roads now running into the city are the Northern Pacific, the Union Pacific, the Spokane & Northern, the Spokane & Idaho, the Spokane & Palouse, the Washington Central and the Seattle, Lake Shore & Eastern.

The Northern Pacific was completed to Spokane in 1881, and was completed through to Puget Sound and the Pacific Coast in 1884. It was the first great trans-continental line to open up what was then the Territory of Washington (now the State of Washington), to settlement and prosperity. Railroads are the great civilizers and wealth producers of the age, but it is doubtful if ever there followed in the wake of any advancing line of rail-

way so wide-spread and great development and enrichment as that which has followed the building of the Northern Pacific railroad into the Pacific Northwest. Roads had already been completed across the continent on the southern and middle lines, but it remained for the Northern Pacific, constructed on the northern line, to cause the erection of the first chain of States extending from the Atlantic to the Pacific. When before in the history of the country has there been such rapidity of development, such a rapid accumulation of products that are the staple in the world's commerce, such an increase of population and wealth, such wonderful achievements in the building of cities, and the taking of such marvelous strides in the construction of a new and powerful industrial empire, as has occurred during the last ten years in this northwestern corner of the Union, embraced in the State of Washington? The Northern Pacific was the pioneer line that opened to the world the possibilities of this new territory, and following it has come almost every line of railway crossing the continent. In the State of Washington will be found the Pacific Coast terminus of the Union Pacific, the Great Northern and the Canadian Pacific in addition to the Northern Pacific. They are all seeking a foothold here, and one does not have to look far ahead to see where the focal point of the commerce on the western side of the continent will be. It is because of these considerations, because of the

great pioneer work done by the Northern Pacific Railroad in demonstrating the latent wealth of this country, that our people will always feel a grateful appreciation of the services of Henry Villard, for it was he more than any other one individual who had the power to comprehend the character and extent of our resources, and it was he before any other who had the skill and the courage to carry his convictions into effect. Spokane has had some sharp contests with the Northern Pacific, and will probably have others, but her people are none the less alive to the work done by that road in building up their city, as well as the State of Washington.

The Union Pacific completed its line into Spokane in the autumn of 1889. This gave us a second transcontinental line and opened up a very rich farming country to the south. For nearly 200 miles south the Union Pacific runs through a wheat and farming country of marvelous richness. It has a branch known as the Washington & Idaho, leaving the main line about 30 miles southeast of Spokane, and going directly into the rich Coeur d'Alene mining country. There is a daily train service between Spokane and the principal points in the Coeur d'Alene district over this line. Spokane is the Northeastern terminus of the Union Pacific system. The system here reaches its highest northern point. It finds here a rich and profitable territory having more business than it can handle. The truth is there existed from October 1st last year to January 1st this year a blockade on both the Union Pacific and Northern Pacific lines throughout the

wheat-growing districts of eastern Washington. Illustrations are given on these pages showing the wheat piled up in great pyramids at various stations on these two lines during the period that the blockade existed.

The Great Northern will be the third transcontinental line to get into Spokane. The contract has been let for the construction of the Great Northern to this point by November of the present year. The grade stakes are now being set all along the line northeast of the city, and the actual work of construction has already begun. When the Great Northern shall have been completed to this point, Spokane will be the only interior city west of Chicago having three transcontinental roads. The coming of the Great Northern is looked forward to with great interest by our people. It is a very stable and reliable road. It will open up a new country both east and west. New farming lands will thus be brought into the market. New and wide forests of timber will be made accessible, and new and tributary towns and cities will spring up where there are now but wastes of wild and uninhabited country. Spokane & Northern was built during the summer of 1889 and the spring of 1890. It extends from Spokane to Little Dalles, a point on the Columbia river 125 miles north and a short distance south of the British Columbia boundary line. This road was planned and built by D. C. Corbin, of New York, who has long been closely identified with mining and railroad interests in Montana, Idaho and Washington. He built the Spokane & Northern to control the business in that

wide extent of country lying immediately north of Spokane. It has been a profitable line from the start. There is a large lumber trade arising on the first forty miles out of the city, and the upper portion runs through the celebrated Colville valley, which is the most prolific hay-producing country in eastern Washington. It does a large business in shipping ores out of the Colville mining district, and at Marcus, a point 25 miles below Little Dalles, a branch will be built out through the Colville Indian Reservation to the Okanogan and Wannacut Lake mining districts. The surveys for this branch line have been made, and Congress has given the right of way through the Reservation. It is Mr. Corbin's intention to extend the line from Little Dalles into the Kootenai mining district of British Columbia. At present, connection is made at Little Dalles with a line of steamers on the Columbia, that run up to Revelstoke on the Canadian Pacific. In this way Spokane has made connection with another transcontinental line. The trip from Spokane to Revelstoke over this route is one of the finest from a scenic point of view in America, and is very popular with tourists in the summer season. There are three hundred miles of steamer travel on the Upper Columbia, where the scenery is wild and rugged and picturesque beyond description. Many tourists now come to Spokane over the Northern and Union Pacific roads, and here they take the Spokane & Northern for this splendid tour, making connection with the Canadian Pacific at Revelstoke and going in that way to Victoria and Vancouver, where connections are made for Alaska or the Puget Sound cities of Seattle, Tacoma and Olympia.

The Spokane & Idaho is a branch of the Northern Pacific, leaving the main line a short distance east of the City and running into the rich Coeur D'Alene mining dis-

tricts. It runs to Lake Coeur D'Alene, one of the most beautiful bodies of water on the Pacific slope. This lake is thirty miles from Spokane, and is greatly frequented in summer as a fishing and camping resort.

The Spokane & Palouse is another branch of the Northern Pacific, leaving the main line nine miles west of Spokane and going down into the great Palouse farming region. It runs to Lewiston, in Idaho, a distance of 160 miles, and is one of the most valuable feeders of the trade of this City.

The Washington Central is still another branch of the Northern Pacific, leaving the main line a few miles still further west, and runs out into the famous Big Bend country for a distance of about 120 miles. It is to be extended to the Columbia river, and perhaps into the Okanogan mining district.

The Seattle, Lake Shore & Eastern railroad runs from Spokane into the Big Bend country, it and Washington Central being almost exclusively agricultural roads.

This completes the list of roads centering in Spokane. It will be seen that they radiate in every direction and cover a very wide and fruitful area of country. Extensions were added to three of these roads during the year 1890, twenty-five miles to the Spokane & Northern, taking it from Marcus to Little Dalles; seventy miles to the Spokane & Palouse, in the way of a branch running from Pullman to Lewiston, the latter place being in Idaho and the center of a fine agricultural and fruit district, and about fifty miles to the Washington Central, taking it from Wilbur to a point several miles beyond Coulee City. The present year will witness the construction of the Great Northern, and on that line will be done most of the railroad building for the year in the country tributary to this City.

A GREAT ELECTRIC LIGHTING STATION.

REFERENCE has already been made to the purposes served in the city by the power derived from the falls of the Spokane River. The most remarkable single illustration of the development and practical application of this power is perhaps found in the electric lighting plant of the Edison Company.

Electric light in the city was first supplied by the Spokane Falls Electric Light and Power Company in 1885, the capacity of the plant being twelve arc lights and 300 incandescents. In 1888 the Edison Electric Illuminating Company, of Spokane Falls, was incorporated, and acquired possession of the plant of the Spokane Falls Electric Light and Power Company and increased its capacity to 1,200 incandescent lights and eighty arc lights. In August, 1889, at the time of the great fire, the plant consisted of 135 arcs and 1,800 incandescents. Since then the pole lines have been rebuilt and extended, and there have been added 215 arcs and about 3,200 incandescents, bringing the total capacity of the plant up to 350 arcs and 5,000 incandescents. The Edison Company, which controls the entire lighting field, was until recently running its plant at three separate stations, but the increased demand for light and power, and the outlook for the future have caused it to build and equip a large central station.

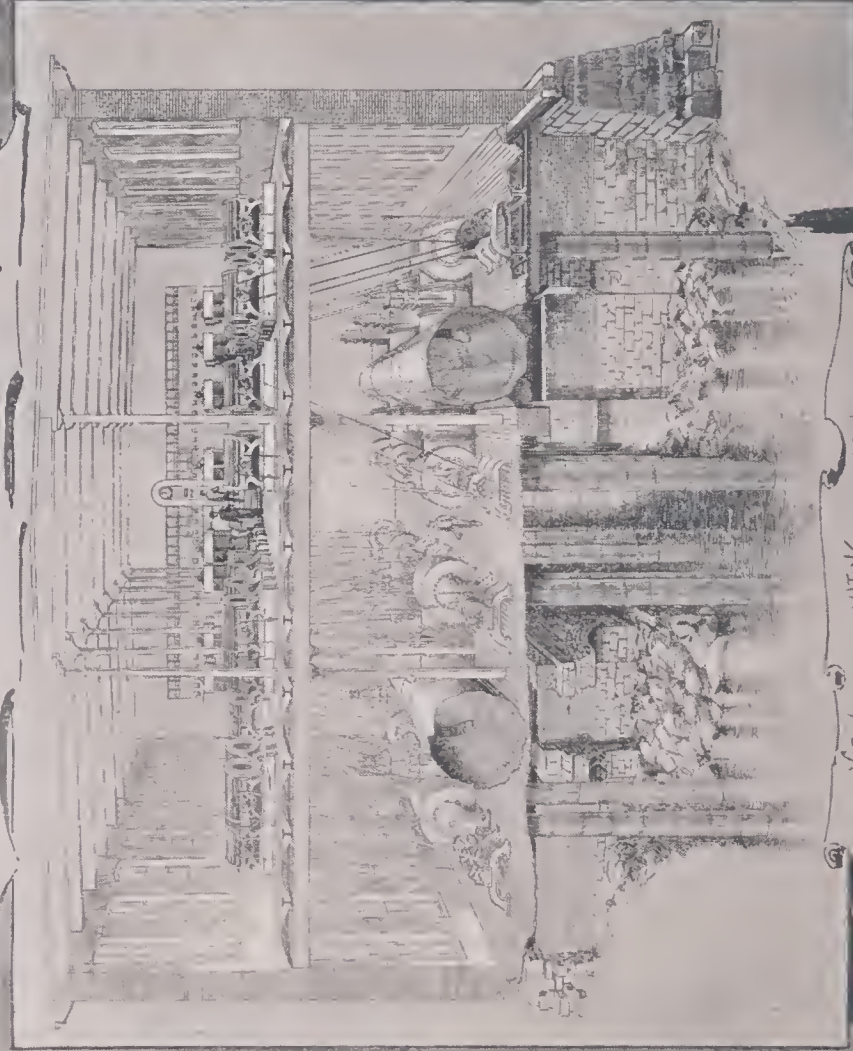
This new station is situated at the foot of the lowest fall on the south side of the river, at the corner of Front and Monroe streets, on the property of the Washington Water-Power Company. This site was selected by the engineers of the Edison Company as being the best spot for obtaining absolutely trustworthy power all the year round, and where the station could be enlarged to meet the demands of a city of 100,000 people.

The dimensions of the main building are 65x120 feet. It is two stories high. The wheel room and foundations are composed of heavy granite, obtained from neighboring quarries, laid in Portland cement mortar, 2,500 perch of granite and 1,000 barrels of cement being used. The upper portion of the building is composed of brick, with pilastered walls. The floor girders are of rolled iron, the columns of cast iron, and the floors of corrugated iron arches covered with Portland cement concrete and tiling, supposed to be absolutely fire-proof, the entire building being designed with this end in view.

The supply of water to run the turbines comes down into the station through two steel penstocks, each seven feet in diameter and nearly 500 feet long and deliver 2,700 horse-power. All the wheels and hydraulic equipment are in the first floor, the second floor being given up to the dynamos and electrical apparatus. The wheel equip-



WASHINGTON WATER POWER CO'S PROPERTY
& THE NEW EDISON ELECTRIC LIGHT STATION



INTERIOR VIEW OF THE NEW LIGHTING
& POWER STATION
AT SPOKANE FALLS, WASH.

ment consists of 12 pairs of Victor turbines of the twin horizontal pattern. Four pairs of these wheels are of 15 inches in diameter and have a capacity to drive 24 Thompson-Houston arc dynamos of 50 lights each. The other eight pairs are of eight inches diameter and have a capacity to drive 16 No. 20 Edison dynamos.

The water-power designs have been carried out with the idea of duplicating as nearly as possible the perfection of small units of power as now in vogue in the best constructed Edison stations in the East. For instance, in the Edison department, each pair of wheels drives a pair of Edison dynamos; and as there are eight pairs of wheels driving eight pairs of dynamos, any variation of load, distributed as it would be over the equivalent of 12,000 lights would be unnoticeable to the consumer. In the arc department, where there is no variation of load to be noticed, the wheels are designed with the idea of carrying six machines each. The early lights run exclusively from one machine and are usually all started and all shut down at the same time. The all-night machines to the number of six, run from another pair of wheels. This arrangement is carried out in the entire arc department. The duplication of flumes has been found necessary after a long experience with water-power and will enable the company to shut down either one of its flumes during the day time without impairing the day service in any way

and, as already stated, any one of the water wheels can be shut off, leaving all the others in full operation.

The station throughout has been designed with the one idea of getting absolutely uninterrupted power both day and night all the year round, and the most experienced engineers that have examined the plans and designs agree that the company, while adopting a somewhat new departure in the development of water-power, has succeeded in accomplishing its desideratum.

The plans for this station and the designs for the hydraulic arrangements are the work of Henry A. Herrick, resident engineer of the Washington Water-Power Company, under the superintendence of Col. J. T. Fanning, consulting engineer, and give evidence of great skill and care. The plans and designs for the electrical equipment of the station are the work of Mr. John B. Fiskien, the electrician of the company. It is probably the greatest water-power station for the generation of electric current in the world. The officers of the company are: F. Rockwood Moore, president; John W. Chapman, vice-president; J. D. Sherwood, treasurer; W. S. Norman, secretary and general manager. The stockholders include some of the most prominent capitalists of the city. The capital stock of the company is \$200,000, fully paid up.

CLOUGH & GRAVES.

THE firm of Clough & Graves is well known, not only in Spokane, but throughout the Pacific Northwest, having been in existence about three and one-half years, and is composed of the Hon. C. F. Clough and Mr. Jay P. Graves. Since its advent into the Realty field, the firm have made some very large investments; in fact, some of the largest investments made by outside capitalists have been negotiated through their office. By their shrewdness, their judgment, and their conservative business methods, they have made some excellent and paying investments, thus gaining an enviable reputation and building up a business that stands pre-eminently in the front rank of sound financial firms. The aggregate sales of real estate made by this firm in a single year reached \$2,000,000, which shows the confidence reposed in these gentlemen by Eastern and Western capitalists. Both members of the firm have accumulated a large amount of very valuable property, both improved and unimproved, consisting in part of business blocks and residences. They have made a specialty of organizing syndicates for the purpose of buying large tracts of land, platting and selling of same. The different projects of this nature that they have been engaged in were in every instance a financial success, and the members of the firm have invariably been members of these syndicates, thus testifying

to the confidence they felt in their transactions. One tract of twelve acres was handled by them in this manner, the syndicate paying \$70,000 for the property. Inside of six months the property was sold for \$281,000. While this was an exceptional case, they have been eminently successful in making profitable investments for all the companies and syndicates that they have organized.

The Hon. C. F. Clough has resided in Spokane for seven years, and has seen it grow from a straggling village of a few hundred people to a large, thriving city of 30,000. He has prospered financially and has gained the confidence and respect of his fellow-citizens, having just retired from the office of Mayor. He is well known throughout the Pacific Northwest for his keen yet conservative business methods, which have amassed for him a comfortable fortune.

Mr. Jay P. Graves is one of Spokane's most active citizens. His work in connection with the Chamber of Commerce has aided in the successful termination of a large number of public matters, and his judgment is highly valued by his colleagues, as is testified by the work intrusted to him when an energetic committee worker is needed. His integrity and reliability have gained for him an excellent reputation, and he is numbered among Spokane's largest capitalists.

HOLLEY MASON MARKS & CO.



HOLLEY, MASON, MARKS & CO.

THIS is a typical Spokane commercial enterprise. It is one of the largest and most successful hardware concerns on the Pacific coast, and the story of its growth reads almost like a romance. The business was established in June, 1884, by W. R. Newport and Joseph B. Holley. They occupied a one-story frame building. The business was begun in a very small way with a limited capital, but was a success from the very start. It gradually increased, and before the first year had rolled around the quarters were found to be entirely inadequate, and they moved into a three-story brick, on the corner of Howard and Riverside avenue. In March, 1887, Mr. Newport's health having failed, he disposed of his interest in the business to F. H. Mason, and the firm was reorganized with an increased capital under the firm name of Holley, Mason & Co. The increase in the volume of business in sympathy with the phenomenal growth of the city and country was very rapid, and it soon became necessary for the firm to lease the entire three-story building, and the partitions for offices were taken out and the building remodeled. In the spring of 1888 this building was found inadequate to hold the stock which it was necessary for the firm to carry, and they purchased property at the corner of Howard street and Railroad avenue, and had plans drawn for a three-story brick building, the intention being to use this for their wholesale business and

warehouse, and continue the retail business at the Howard and Riverside avenue building.

In the month of November, 1888, Mr. Holley was taken suddenly ill, having broken down from overwork, and died on the 26th of the month. This necessitated a change in the business, and a consolidation was made with the firm of J. R. Marks & Co., who had been conducting, for several years, a hardware business in the Cœur D'Alene mining country, having stores at Wardner, Wallace, Murray, Mullan and Burke. A joint-stock company was formed with a paid up capital of \$200,000, and the contract for the new building was about to be signed at the time of the great conflagration in August, 1889. At this time the firm had several warehouses, and had their plumbing and steam heating business on Howard street between First and Railroad avenue. The fire swept away their main store and their plumbing and steam heating branch.

Before the fire had ceased to burn, the lumber for a temporary store at the corner of Howard and Railroad avenue had been contracted for and goods had been ordered by telegraph. The fire occurred on Sunday, and by the Thursday following, the temporary building was under roof (the tin for the roof having been brought in by express), the first carload of goods had arrived from Portland, and the business was under full sway again.

After the fire, the firm, realizing from past experi-

ence that commodious and ample quarters were absolutely necessary, entered into a lease with Mr. F. R. Moore for a building to be erected expressly for their needs, on Howard street, between Main and Riverside avenue, with a frontage of 80 feet on Howard, six stories in height, with basement. This building was rushed to completion, and the firm moved into it in the spring of 1890. The building is constructed especially to hold an immense weight. The basement is large and well lighted. It is used for the storage of cordage, nails, bolts, lumberman's tools, and similar goods. The entire building is heated by steam, the boiler rooms being located in the rear of the basement. The first floor is finished entirely in oak, and has every convenience known to the trade for the handling of their goods. The offices are a marvel of beauty. The second floor is used as a salesroom for stoves; the shipping and packing departments are located here; it contains the reserve stock of shelf hardware and leather and rubber belting, of which the firm carries a large stock. The third floor is used as a salesroom for plumbing supplies, steam-fitting supplies, brass goods, and it contains the offices of the foreman and the book-keeper of the steam

and hot water heating departments. The fourth floor is devoted entirely to the storage of stoves and stove castings. The fifth floor is used for the storage of wagon wood stock and light articles in their line, and is filled to overflowing. A partition divides this floor, and one of the departments thus made is devoted entirely to the firm's stock of pieced and stamped tin and agate ware. The sixth floor contains one of the best appointed tin shops that can be seen anywhere. It is amply lighted. The firm's stock of hot water furnaces is on this floor. The entire building is lighted by combination fixtures of electricity and gas. Speaking tubes connect the office and salesroom with every floor, and nothing has been omitted which will contribute to the rapid handling of goods. In the rear of the building are one-story brick buildings built and constructed especially—one for iron and steel and the other for iron pipe and a shop for cutting and threading of same. A platform is built in front of these buildings fronting on the alley, and with plenty of room for the handling of goods for city delivery or country shipments. The business of Holley, Mason, Marks & Co. now extends throughout eastern Washington, northern Idaho and the Kootenai district of British Columbia.

THE SPOKANE REVIEW.

DAILY AND WEEKLY.

THE only metropolitan journal published in Eastern Washington, is typical of Western enterprise and progress. On May 15, 1883, the *Review* was established as a weekly by Mr. Frank M. Dallam. It was continued as such until June 16, 1884, when it branched into an afternoon daily. The following year it was changed from an afternoon to a morning paper. On July 1, 1886, Mr. H. T. Brown purchased an interest, and later Mr. H. W. Greenberg was admitted to partnership; the Associated Press dispatches were secured, and the paper enlarged. In the summer of 1887, Messrs. Brown and Greenberg purchased the interest of Mr. Dallam, and on April 1, 1888, disposed of the entire plant, franchises, good will, etc., to Hon. P. H. Winston (present United States Attorney for Washington); Hon. Willis Sweet (present Representative in Congress from Idaho) and Messrs. Jas. Monahan and C. B. King, prominent citizens of Spokane, who formed a joint stock company. On October 1, 1888, the interests of Messrs. Sweet, Monahan and King were purchased by Messrs. Harvey W. Scott and Henry L. Pittock, both newspaper men of long standing.

Mr. Winston continued in his capacity as editor of the *Review* until his extensive law practice compelled him to withdraw his connection with the paper, and on December 3, 1888, his portion of the stock in the company was purchased by Hon. A. M. Cannon, one of the oldest and best known citizens of Spokane. The present owners saw the necessity of making a first-class newspaper at Spokane, and that this was the field for a journal of high political and social standing, such as the intelligent people of Spokane vicinity demand.

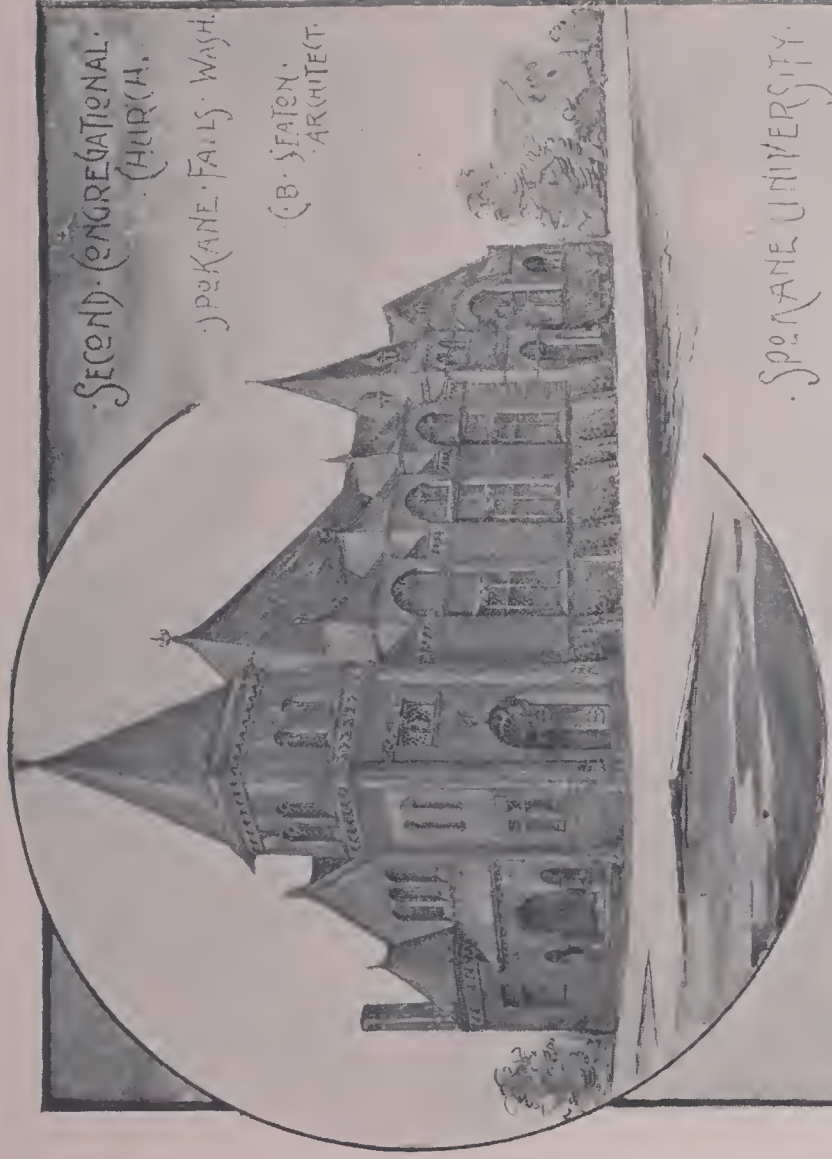
On October 1, 1888, Mr. F. C. Goodin assumed the

management of the *Review*. Over one-half of his life has been devoted to newspaper work, and the promotion of the *Review* to its present high standing is largely due to his untiring efforts.

Upon the retirement of Colonel Winston as editor he was succeeded by the able writer and politician, Mr. J. M. Adams. Upon the resignation of Mr. Adams Mr. Nelson W. Durham was selected to fill the position. Mr. Durham is an old and experienced journalist. His connection with the press has been unbroken since he reached the age of fourteen years. He has served in nearly every capacity from the case to the editorial chair.

Since the last change in the management, the progress of the *Review* has been far more remarkable than at any time in its previous history. In place of eleven employes, as was the number October 1, 1888, eighty-three persons are now employed on the paper. On July 7, 1889 the old Drum Cylinder Hoe press, old type, etc., were discarded, and an improved Goss Perfecting press, with a capacity of 18,000 copies per hour, and all paraphernalia for issuing a first-class daily were added.

Being crowded for room, the Review Publishing Company decided to erect a building that would be commensurate with the paper, and a land mark in the marvelous city of Spokane. This is situated on the corner of Monroe street and West Riverside avenue, a cut of which appears on the inside cover of this book. It is six stories high, built of pressed brick and terra cotta. From an architectural point of view, it is one of the finest structures in Spokane, and the handsomest newspaper building in the West. In conclusion, it would be well to say, the *Review* is considered the best paper in Washington and enjoys the largest circulation.



SECOND CONGREGATIONAL
CHURCH.

SPokane Falls, Wash.

C.B. EATON.
ARCHT.

SPokane University.



C.B. EATON ARCHT.

SPOKANE UNIVERSITY.

THIS institution will be ready this coming autumn to receive students. Its Board of Trustees consists of Rev. T. G. Watson, M. A., Dr. J. D. Maclean, H. N. Belt, Rev. Donald Ross, M. A., Hon. A. M. Cannon, Hon. J. J. Browne, W. H. Taylor, Geo. H. Leonard, Rev. T. M. Gunn, D. D., N. F. Holman, Dr. C. S. Penfield, J. W. Goss and L. B. Cornell.

The officers are Rev. T. G. Watson, M. A., President; Dr. J. D. Maclean, Vice-President; Samuel Woods, M. A., Secretary and Financial Agent. The first building of the University will contain in the basement a large dining room 43x20, kitchen, bath rooms, furnace rooms, Matron's rooms and servants' apartments. The first floor contains four large lecture rooms, with Professors' rooms attached, handsomely fitted up with open fireplaces. The flats above are large and roomy, affording accommodation for seventy students. The library will be located on the second floor. The style of architecture is modern colonial. The campus, upon which the buildings are being located, is on University Heights, to the west of the city, and consist of 36 acres of land. The buildings are to be constructed on the bluff overhanging the Spokane River, and commanding a most beautiful view in every direction. Eastward lies the city, about 200 feet below and on both

sides of the Spokane, and away beyond, some twelve miles, an uninterrupted view of the river valley. Southward the wooded valley of Latah, or Hangman's creek, with the Palouse valley in the distance. To the east and north, the snow-clad summits of the Cœur D'Alene and Kootenai mountains, and to the west the wooded hills melting away in the dim perspective.

The Board intends to make the institution first-class in all its appointments, and will aim at a very high standard of excellence in all the departments of study. The course of study will be modeled on the plan of the Eastern Universities, and every effort will be put forth to secure the confidence and support of every lover of thorough education. While the institution will be Presbyterian in its governing body, the teaching will be on the widest Christian basis, and entirely unsectarian. A Theological Faculty will be organized as soon as possible to answer one of the aims of the promoters, but for the present, purely educational work will engage the attention of the Board. Law and Medical schools will also be organized, or affiliated, and the interests of scientific learning will hold a foremost place in all the plans of the departments of study.

THE SPOKANE AUDITORIUM.

PRE-EMINENT among the mammoth structures of the Pacific Northwest is the Spokane Auditorium. Not alone that it is of such mammoth proportions, its beautiful and costly interior decorations have placed it without a rival, and it takes rank as one of the finest opera houses in the United States. The best of talent, the most skillful mechanics, the latest mechanical appliances, and the most modern improvements were the basis upon which the owners built this magnificent structure, which is the pride of every Spokaneite, the admiration of all visitors, and the wonder and adulation of all the theatrical profession.

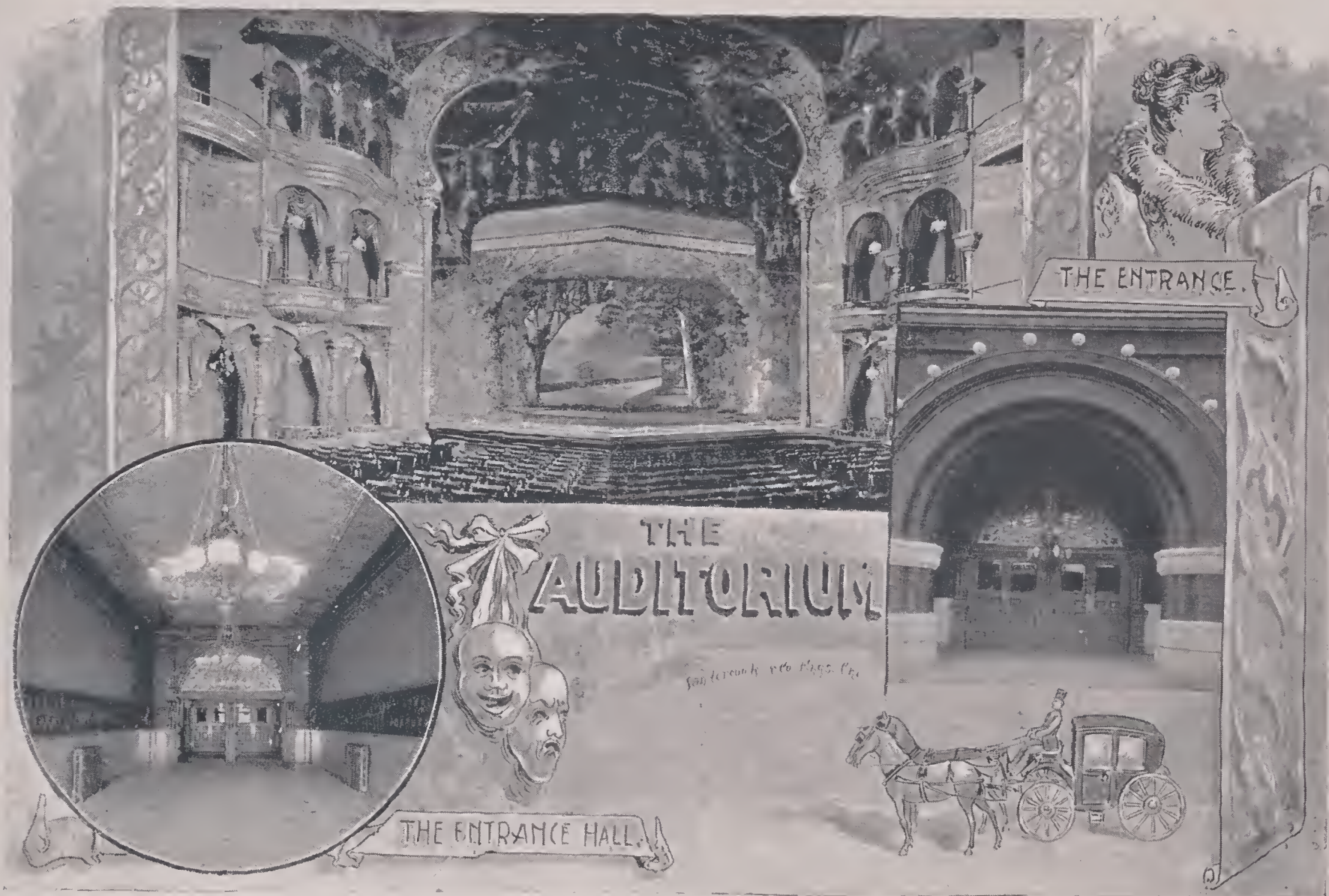
The building was erected by the Hon. J. J. Browne and the Hon. A. M. Cannon, two of Spokane's wealthiest and most enterprising citizens, whose judgment and foresight have won them respect and esteem. These gentlemen selected Mr. Harry C. Hayward as manager of the Auditorium, and his popularity and familiarity with the theatrical profession have proved invaluable in making this beautiful theater one of the best known in the country.

The total cost of the building was \$400,000, and the theater is patterned after "The Broadway" of New York.

In the construction of the theater two principal ideas have been borne in mind, and all other considera-

tions have been made subservient to these, namely, the safety and comfort of its patrons; and this has been accomplished without sacrifice of the artistic. From the orchestra and dress circles, with a combined seating capacity of 550, there are ten wide, independent exits; from the balcony, with a seating capacity of 375, there are nine one-flight exits; and from the upper gallery, eight two-flight exits, making, with the five from the stage, thirty-two avenues of egress from the house, which has a total seating capacity of 1,500. The house is further supplied with fire-plugs, six of which are upon the stage. It is cut off by solid fire-walls from the office portion of the building, and a fire-wall and asbestos curtain separate the stage from the auditorium.

The stage is a gem in the way of completeness and ingenuity. It is 65 feet from wall to wall, and from footlights to rear wall it is 42 feet, while the height from stage door to rigging loft is 65 feet, and from stage door to roof is 74 feet. It is capable of handling and setting the largest-size scenery carried by any traveling company. It is supplied with two practical sectional bridges, extending across the stage, which can be raised to any height wanted, for the purpose of building roads, mountain passes, bridges, etc. It is also supplied with all necessary traps.



THE ENTRANCE.

THE AUDITORIUM

San Francisco 1895. P. 1

THE ENTRANCE HALL.

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THE MAIN FALLS OF THE RIVER AT SPOKANE.

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